

# Prayukti 2022

SIDTM Student Journal

Volume 7



॥वसुधैव कुटुम्बकम्॥

**SYMBIOSIS INSTITUTE OF DIGITAL AND TELECOM MANAGEMENT**

[Formerly SYMBIOSIS INSTITUTE OF TELECOM MANAGEMENT]

CONSTITUENT OF SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

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SYMBIOSIS

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# DIRECTOR'S MESSAGE



CA. Dr. Abhijit V. Chirputkar  
Director, SIDTM



Dr. Sujata Joshi  
Professor & Faculty incharge of  
Research & Publication, SIDTM

**P**rayukti, the student journal of SIDTM, aims to motivate the students to do research in the area of Information Communication Technology. Students will be writing research articles in the current areas of ICT and the best articles will be published in this journal. This will help students keep abreast of the current happenings in the area of ICT and also help dissemination of knowledge, information and learning. Students are expected to have an enriching and life-turning experience which will enable them to reach new heights in their professional life. We foster sharpening of skills and enhancement of knowledge base in our students through various extra-curricular, co-curricular and curricular activities through faculty who not only keep themselves at par with the current developments in ICT but also contribute to the expansion of the body of knowledge in their field of expertise. To facilitate this, we have launched Prayukti to enhance domain specific knowledge among members of faculty and among students. With very congenial and professional environment our faculty makes substantial contribution to the academia through quality teaching, publications, seminars, conferences, etc.

# PREFACE

Symbiosis Institute of Digital and Telecom Management works towards developing techno-managers by exposing the students to latest technology, enabling them to manage the technological aspects of an organization.

As a part of a telecom business school, that has adapted and catered to the needs of the ever-changing Information and Communication Technology (ICT) industry, it gives us an immense pleasure to release the fourth edition of Prayukti. The success of the magazine lies in the collaborative efforts of the team members, students, and the faculties. The magazine reflects the business aspects of current and upcoming ICT trends through papers written by the students.

Prayukti is an initiative of Symbiosis Institute of Digital and Telecom Management. The name is derived from a Hindi word 'Prayukti', which resonates the aim of the magazine, which is motivation, application and result. The latest trends of ICT industry are researched and are brought upon through insightful papers. This edition comprises of Papers 159. This year the areas of focus are: Tackling the obstacles of IoT implementation in India, OTT distribution and customer behaviour, future of SEO, blockchain regulatory framework in financial industry, Digital Transformation, data-driven marketing, electronic smart systems and drones of tomorrow. On behalf of the journal members, we would like to take this opportunity to express our gratitude to all the Professors for their support and guidance and to the students who have directly or indirectly contributed to the magazine. We would love to hear your suggestions that could help us with the future editions.

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## **1. Adoption of Blockchain in Trade Finance and Its Impact on Financial Decision Making**

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**B**lockchain has been able to create a significant impact in the fields of banking, investing and crypto currency in the last few years. Its recent deployment in the area of trade finance has also shaped up the area of banking and finance. Blockchain has been able to overcome the drawbacks that were eminent with the traditional methods of trade financing like cost, time and errors involved in it. Big and established companies, especially operating in the trading and shipping industry have been able to deploy blockchain methods in their financial transactions and have observed significant impacts due to it. By incorporating Blockchain, automated financial decision making is also made possible as the technology is able to confirm the authenticity of the transactions on its own. However, a comprehensive study of the technology in the area of trade finance is minimal. Thus, the aim of this paper is to study the adoption of blockchain technologies in trade finance and their impact on financial decision making, while also providing future implications for the same. The approach followed is of a case study approach that would make use of a few major use cases of established organizations in the sectors of trading & investment and technology & IT consulting with respect to the method of blockchain that they adopted. The study would be useful for academicians, the subject matter experts, and the organizations operating in the sectors mentioned as they would be able to take decisions to deploy the technology to their benefit.

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## **2. Robotic Process Automation (RPA) for Patient's Admittance and Discharge in Hospital**

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**R**obotic Process Automation (RPA) can be used to improve the existing process of admittance and discharge in hospitals. Admittance and Discharge processes are some of the crucial processes in any hospital. By making it an efficient and error-free process, the hospital can treat more patients per day. By using RPA, repetitive tasks like

paperwork can be offloaded to RP. A robots hence freeing the human workers to do more productive work. RPA can increase the hospital's efficiency, enhance inter-department as well as hospital to patient communication and can help in doing paperwork and filing insurance claims. In this paper first, an overview is given on current admittance and discharge procedures followed after that RPA in hospitals and admittance and discharge process is discussed. Then deficiencies and RPA implementable areas are identified in the current process. A solution is proposed which aims to solve or reduce the effects of deficiencies identified. Finally, the strength, Challenges and Opportunities of the RPA implementation is discussed.

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### **3. Twitter Activity and Engagement Analysis of Football Club (FC) Goa Compared to the Other Participating Clubs of the AFC Champions League 2021**

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The objective of this paper is to ascertain whether FC Goa, who were the only representative club from India in the AFC Champions League 2021, are at par with their competition in the AFC Champions League 2021 in terms of maintaining a healthy level of activity on Twitter whilst ensuring that their content in the form of Tweets is being engaged with to the desired level by their followers. The Twitter Advanced Search tool was used to collect the data of comments, retweets and likes made by the followers on Twitter of only those participant clubs which have a verified Twitter account, the season for which the data is collected for each club is the last completed season of each club before the AFC Champions League 2021. After collecting the data, the clubs were ranked using Microsoft Excel 2013 on the basis of two parameters: Activity and Engagement. The Study revealed that FC Goa was the second best performing club in terms of activity on Twitter out of a total of 20 participating clubs however, in terms of being able to garner enough engagement from their followers, they stood last. The findings of the study will enable the e- marketers of FC Goa to gauge the current landscape of the popularity of their club on Twitter. The model of analysis used in this study is conceptual. The analysis performed is significant because it provides the readers the insight into the ability of a top Indian football club to drive fan engagement through the medium of Twitter. The model can aid similar research in the future that aims to take any club from India as a subject for comparison with clubs from different Asian countries.

## **4. IoT Enabled Mental Health Diagnostic System Leveraging Cognitive Behavioral Science**

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As the complexities of mental disorders grew in tandem with the COVID-19 pandemic, a technical solution to this problem became urgently necessary. To cater to the needs of those who are unable to reach out for direct assistance, IoT-enabled mental health diagnostic systems, in combination with cognitive-behavioral science, are a lifesaver. Advanced devices are used to track various hormones in the body and to apply behavioral and cognitive science to generate effective results. For the purpose of this research, we will review various Research Papers and articles published between 2010 and 2021, highlighting the findings added by these reports and the areas in which they were unable to explore. This research will be highly useful to numerous network and architecture companies that specialize in developing IoT devices for the healthcare industry, as well as to researchers, particularly in the field of neuroscience, behavioral science, and psychiatry. It may lead to stronger use of Internet of Things (IoT) devices to detect behavioral anomalies and improve effectiveness by taking corrective measures.

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## **5. Application of big data analytics for health care – A study on COVID-19**

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The sudden and rapid spread of SARS coronavirus in 2019 was catastrophic. The healthcare sector was not able to uphold the sudden outbreak and the hospitals had to take care of an overwhelming number of Covid 19 patients. According to predictions, the second wave will be even more deadly. The total no of Covid cases stands at 123 million with recovered 69.6 million and 2.71 million deaths. Why coronavirus is so dangerous is with how much ease it gets transmitted between humans. WHO declared Covid 19 to be a pandemic and cautioned all countries to give it top priority ensuring that it gets the highest level for risk assessment. A pandemic can be mitigated depending on the ability to identify the affected areas, individuals, and potential hotspots on a global level. Analyzing data using big data analytics from the hotspots, where data is easily available with countries and cities. If this data is modeled mathematically and used with AI, important predictions could be made. Information about the movement

of people like done in Taiwan where travel history of a woman suffering from cough and diarrhea was correctly used to diagnose that she had covid19. Contact tracing is essential to predict the outbreak of a disease with data that is collected from different sources, for examples- post with metadata, tags on social media passenger lists, smart cards used in metros, where vehicles were parked, what all places credit and debit cards were used and the travel history. The methodology used is gathering secondary data of contact of what all locations the affected person visited. Data from social media and social networks can be worked upon and reconstructed to predict the outbreak of communicable diseases. The Research requires large amounts of data to be analyzed and help provide a prediction model for similar diseases by using MERS and SARS data. There are examples of companies like BlueDot which used AI analysis of data points from multiple resources and predicted the outbreak in December 2019 mid. Using big data will have its advantages because we can use data from multiple sources and merge them to understand the next COVID19 or similar disease outbreak and predict the possible occurrences in different regions. AI and Big Data will help in preparing us for emergencies. The research will help in tackling the disease in real-time and help governments and organizations to plan and respond to sudden emergencies, lift public health, and identify vaccine candidates. The research paper will help researchers to uncover relationships within massive datasets and help them in decision-making. This paper will help them in integrating information from multiple resources and predicting disease outbreaks.

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## **6. Applications of Unmanned Aerial Vehicles (UAVs) for Improved Business Management**

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Implementing Unmanned Aerial Systems (drones) for commercial purposes can have a vast and rapid impact on business decisions. Business enterprises can better align emerging UAV technologies to their exclusive needs. Business managers involved in decision-making need to better capture developments in the commercial applications of drone technology and reap the benefits of its economic implications. This paper explores the current applications of drone technology by various kinds of enterprises and analyses the trends in the drone market. Surveys from industry and consumers give business insights into the UAV market. Consumer opinions towards consumer drones are also discussed. It analyses the impact of UAVs on commercial activities, opinions from industry and consumers, and provides information on emerging business decision opportunities.

## 7. A Comprehensive Research on Password Managers

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**A** Comprehensive study on the type of threats, vulnerabilities in password managers. In addition a primary research on the use of password managers by the technical pool of the users, which would provide us an eye-opening insight about the rare usage of such an important utility even by technical users. A Qualitative research which includes a comprehensive questionnaire (Pearman et al., 2019) for the technical pool of users, regarding their password saving habits. A comprehensive research which broadly compares almost every aspect of the modern day password managers such as its working algorithm, usage, vulnerabilities, exploits. In addition, it would also compare various security aspects & risk of data loss for users who use a password manager Vs the users who do not use one. (Gasti & Rasmussen, 2012) Primary research on the use of password managers by the technical pool of the users, Which would provide an eye opening insight regarding the major hazards & acceptance of risk by public/private organizations, employers, firms, general public, who are not adequately aware & security centric regarding safe storage of passwords. (Pearman et al., 2019) Comparing various security aspects & risk of data loss for users who are considered as technical pool of users Vs Non-technical pool of users.

---

## 8. Conceptual Framework of Security Threats in Healthcare Systems

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**T**he risk management plan should first and foremost include education and training of the employees. It needs to give detail preparation requirements which should include orientation, ongoing and in-service training and event specific training. Measures for recording and reacting to patient and family grievances should be described in the Risk Management Plan to increase patient satisfaction and limit the possibility of litigation. The plan should specifically state the goals to diminish obligation entitlements, custodian events and the cost of the organisation's risk should also be well expressed. Contingency plans for unfavourable system-wide failures and disastrous situations, such as faulty EHR systems, security breaks, and cyber assaults, should also be

included in risk management strategies. Disease outbreaks, long-term power outages, and trepidation strikes or mass shootings all require emergency readiness in the strategy. The healthcare risk management strategy should be a live document that is updated and enhanced on a regular basis to reflect new risks, teachings gained, new information, and fluctuations in the healthcare system and medical practise. When these updates and modifications are made, the strategy should include provisions for communication and training.

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## **9. Study of Incorporating Signal Intelligence Analysis on the COVID-19 Outbreak**

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**T**he goal of this research paper is to use the Open-source intelligence approach and content analysis to analyze the fundamental aspects of nationally issued COVID-19 contact tracing apps and derive a theme from it. Design/methodology/approach: We conduct a qualitative examination of contemporary discourse on OSINT and SIGINT, as well as their impact on global health. A theme can be built around it, depending on how serious the situation is or assumed to be, by gathering input from everyday people working in various sectors, students, and patients who have tested positive for COVID, and creating a quantitative and qualitative study of current health data collection capabilities. This paper analyses how individuals can find and decipher various consumer activities on social media, opinions through discussion forums, knowledge consumption and sharing through blogging, Wikipedia and user generated content, by taking the example of one such platform that has freely available customer opinions. This paper will also talk about the use of latest technology such as analysis of natural language, monitoring pictures and videos, identifying most used text or other patterns to identify pain points to help decipher such text, understand customer motifs, innovate and better product design and packaging, opportunities, emerging trends to shift market, segment potential customers, and track brand perception.

## 10. Big Data Analytics and Its Application in E-Commerce

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In today's world, due to technological advances and their numerous applications, huge data is generated. Today, everything from information exchange to buying and selling is done through the internet. This has resulted into a huge mass of data which can provide deep insights into the business. As a result of this, both small and large e-commerce businesses make use of big data analytics to obtain a competitive edge over others. Through deep understanding of a market, product or clientele, larger rewards can be reaped, and e-commerce companies by understanding big data capabilities and by using various analytic techniques can understand the purchasing behaviour of their customers. This paper discusses how application of various big data analytic techniques can bring about positive change in any e-commerce business. This qualitative study analyses some relevant use cases. This research will be useful to all existing and aspiring businesses in the e-commerce space, as it provides critical insights on how to incorporate big data analytics with their business, so that they can extract valuable knowledge about their customers' behaviour which can enable them, inter alia, to provide a personalised shopping experience.

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## 11. Sentiment Analysis of Social Media Data to Identify Consumer Needs In the FMCG Food Sector

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The purpose of this research is to provide a detailed and accurate in-depth comprehension of how sentiment analysis can be utilized to analyze customer mindset, emotions, behavior and activities on the social media platforms. This will help identify patterns and anomalies to draw insights about which factors drive the market, which factors have potential and which should be avoided. This paper intends to start with a systematic literature review through the journals and study published by technology driven companies or academicians about how they plan to or are using sentiment analysis in gathering intelligence. How this intelligence is further used to innovate or improve their products and services. Progressing to highlighting how few FMCG companies that have analyzed open source information or media and entertainment

have found out that it is the primary influence on people to define their taste and preferences. Then using this knowledge came up with changes in the existing product lines or launch an altogether new product line to create value for consumers. Moving on to secondary qualitative research to understand what motivates consumers to use social media, what they individually use it for and what they hope to achieve from it as well as in creating models and frameworks that help categorize customer sentiments. This paper will help companies take decision based on the scope of sentiment analysis in analyzing social media bulk of data and should it be a good investment to help increase core competencies. Such analysis includes how many times a particular word is mentioned, which words are frequently used together, how people feel towards brands and products by deciphering certain words and thus spot an emerging trend.

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## **12. Competitive Landscape of IT Industry in the 5G ecosystem: A case study of AMDOCS**

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The upcoming 5G sector is going to play a huge role in the global telecom market. It will have a deep impact on the IT service providers and OSS-BSS industry. The research paper highlights on the leading IT service providers comparative analysis and the possibility of how AMDOCS aims to compete with them, to sustain in the existing market competition.

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## **13. Cyber security Analysis and Biometric Implementation in Autonomous and Connected Vehicles (ACVs)**

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Even though today's Autonomous and Connected Vehicles (ACVs) are still at a nascent stage and have not reached entirely 'driverless' capability, the built-in functions in cars are becoming dependent on different in-car applications and sensors located in the cars. With increased reliance sensors within the cars like cameras, RADAR and LIDAR for vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communications,

which allow the car to connect with other vehicle locations to reduce accident risk by managing ACV speed and inter-vehicle spacing and integrate with infrastructures such as Smart traffic light management system for better efficiency and increased use of next-gen technologies such as Telematics and AI-voice and face recognition, the data collected from ACVs is immense. (Automotive Ricardo, 2020) With large volumes of data, comes a greater risk of data being exposed and manipulated. Personal Information such as user location, travel history of the user and car, entertainment choices and transaction or payment details may be stolen by attackers or the attackers may use DIA (data injection attack) to manipulate the built-in sensors by bypassing critical controls such as accelerator, brake and transmission which may be a life-threatening risk. Nowadays, vehicle features are controlled by third-party mobile applications through Bluetooth, NFC or Zigbee, and attacks such as MITM (Man in the middle) attacks may expose user and company data to hackers. This paper will review the risks associated with driverless cars and a detailed study on how black-hat hackers can use the vulnerabilities to create threats for both users and ACV manufacturers. Finally, there will be a detailed analysis of biometric authentication for message and communication using iris recognition system. The iris recognition system will ensure better encryption of messages for V2V and V2I communication. (Vaidya and Mouftah, 2018).

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## **14. Opportunities and Challenges in the Application of Artificial Intelligence-Based Technologies in the Healthcare Industry**

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This paper researches the underlying period of AI-based advancement applications and their impact on the clinical thought business. Notwithstanding a nitty gritty conversation of the parts, this examination zeroed in on a couple of certifiable examples of AI use in medical services settings. The findings demonstrate that critical crisis facilities are now utilizing AI-enabled technologies to expand clinical personnel in continuous discovering and therapy procedures for a wide range of illnesses. Furthermore, Artificial intelligence (AI) systems impacting the viability of nursing and the regulatory operations of centers. While clinical care providers enthusiastically welcome AI, its applications present both a hopeful (new opportunities) and a pessimistic (new risks) (challenges to endure). We examine the subtleties of those odds and difficulties in order to provide a realistic assessment of the usefulness of Artificial Knowledge applications in therapeutic advantages.. Speedy AI advancements and related technologies will assist caring providers to make another motivating force

for their patients and work on the adequacy of their functional measures. Regardless, to reap the benefits of what advancements have to give, AI will necessitate viable masterminding and systems to change the complete thinking organisation and activities.

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## **15. Understanding Supply Chain 4.0 and Its Scope for Productivity Improvement**

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The article seeks to fully comprehend the Supply Chain 4.0 elements. How advances in technology shape the current operational procedures and how improved productivity may be attained. The reputable papers on the subject have been examined in bibliography. To calculate improved productivity, deductive procedures were employed. Every person, organisation, professional, company member, pupil and school that wants to know about SCM 4.0 and how it has influenced operational efficiencies. This study compiles the knowledge and effects of SCM 4.0 at one place.

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## **16. IOT Based Predictive Maintenance in Industry 4.0**

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The purpose of this paper is to study the value of Predictive Maintenance in today's Industry. Industry 4.0 focuses on digitalization of the Industry, which means that traditional Maintenance methods need to be reformed. With the implementation of IOT in the Industry, new method of maintenance is introduced i.e. Predictive maintenance. For this research case study method has been used, where different use cases in different Industries has been analyzed. All the industries are Industry 4.0 and have adopted IOT technologies for maintenance. Various articles, whitepapers, articles, online databases and reports has been studied to collect data for this research. The study will be useful for managers and government working in Industry. With proper implementation of Predictive Maintenance, increase in production rate, decrease in downtime of machinery and cost effective operations will provide competitive advantage to the industry. This paper presents how predictive maintenance can be implemented in different industries with the help of IOT and how to optimize it.

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## **17. Effectiveness of Forensic Audit in detecting and investigating Loans and Advances Frauds in Banks**

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In 2021, the Indian economy was predicted to grow at a rate of 11.5 percent, making it one of the fastest growing economies in the world. The Banking Sector, like any other economy, is the backbone of the Indian economy. Since the advent of banking sector reforms and economic liberalization in 1991 has witnessed significant growth. Even though the Reserve Bank of India effectively regulates banks, the speed in growth brings inefficiencies in the systems due to the sheer amount of transactions and the need to provide loans quickly. This results in offering Loans to various sectors without focusing on the quality of loan & advances, thereby resulting in a rise in fraud in the financial industry. In the last 10-12 years, there was a considerable jump in fraud cases, especially in loans and advances, as per RBI's annual report. The RBI mandated banks to use forensic auditing as a fraud prevention and investigation tool in May 2015. It is gradually gaining traction as a novel and powerful tool for auditors to detect fraud early on. This paper aims to understand the role of Forensic Auditing in unearthing Bank frauds, especially in the Loans and Advances area, by using literature review methodology, exploratory and case study analysis to give more insights into Forensic Auditing.

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## **18. Application of Big Data in Banking**

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The revolution in big data technologies in the 21st century in each and every sector is here to stay. The banking or finance sector is no exception. It has actually helped in detection of threats, thefts and in preventing them. It has also helped in observing consumer behaviour. Banks use big data in extracting information from the raw data that is available, and in drawing valuable insights from them, which in turn help improve their processes and understand and establish a better connect with their customers. Banks have started to extract the power of data across the different sectors in which they perform, such as, regulatory compliance management, financial crime management, product cross selling, sentiment analysis, etc. These latest trends are being followed not only internationally but in India too.

## 19. Usage of AR and VR in the Automobile Industry

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AR and VR is gaining traction in almost every industry. It is no more restricted to areas like gaming or entertainment. AR and VR can provide tangible benefits in the Automobile industry as well. Objective: By using AR and VR the automobile providers can grow their industry further and can make automobiles more accessible. 'Augmented Reality', 'Virtual Reality', and mixed reality work beyond the reach of physical world. Using these immersive technologies automotive industries can save a lot of money especially in the case of luxury cars whose maintenance and transportation are a bit expensive. So by implementing AR and VR the process of purchasing is becoming less stressful. Implications: The outcomes of this research will not only help the automotive companies save money but also provide a better customer experience as by using this experience customers can toggle between a wide range. They can make sure whatever they choose finally suits them in every aspect. Uniqueness: It has been noted that in India the availability of luxury cars is not much accessible even in the metropolitan cities. Maintenance of these cars can be difficult for the automotive companies and sometimes they suffer huge losses and the sales are also not up to the mark. So for addressing these issues automotive companies can apply solutions like Immersive Show rooming, VR test driving, Virtual Prototyping, etc.

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## 20. Blockchain Technology: Reinventing the Security and Efficiency posture of the Indian Banking System

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Since its inception in 2008, Blockchain technology has been touted as a disruptive force that has the panache for changing business models in this ever-evolving technological landscape. Blockchain is an immutable and ever-growing digital ledger that can keep a permanent record of all the past transactions that have been performed on a network in chronological order. This research paper will primarily focus on the problem of financial fraud prevalent in the Indian Banking System and how we can use Blockchain to prevent it by driving the system towards a decentralized network. The paper will also briefly touch upon problem areas in the Indian Banking System like double taxation and poor status of documentation. Research Methodology:

Qualitative Research will be used to conduct the research. The paper is a conceptual study of the capabilities of Blockchain in making the Indian Banking System more robust. Practical implications: This research paper is aimed at benefiting both the users and banking institutions. It is not only confined to the aforementioned parties, rather extends its impact on a wider range of stakeholders e.g. businesses, NBFCs, shareholders of businesses, etc. Financial institutions can further study their security posture, helping them to fine-tune their transaction mechanism. Originality: The Indian Banking System has long been driven by the centralized network approach which has certain problems associated with it like a single point of failure. The paper will outline the impact of Distributed Ledger Technology (DLT) on various financial institutions and applications.

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## **21. Data Protection Strategy for Healthcare Industry – A Bibliometric Analysis**

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Ever since the revolutionary digitalization started across Industries and enterprises, the immoderate growth of data overwhelmed the world around us. We are often acquitted with the phrase called data is the new oil. With this explosion of data, rises the responsibility of keeping it protected from external threats, exploitation, and misuse of information. Healthcare Industry is expanding its horizon with recent cutting-edge technologies like robotic process automation, cloud transformation, Remote telemedicine facility and thus generating several zettabytes of data every year. Hence, to keep easy access data secure, the healthcare industry needs to absorb a robust strategy for data protection (Saxena, 2021). The steep rise of incidents of data breaches, exposition of critical public & enterprise data, fraudulent activities such as threat calls, false Insurance claims, and even illegal demand for money has shaken the world. This in turn raises the urgency and necessity of having an advanced standardized data protection strategy. The organization involved in the healthcare domain needs to adopt a completely new approach targeting the problem stated above. A couple of cyber security measures, Stricter data protection policies, periodic updates of compliance reports, audits at regular intervals are much required at this very moment (Abouelmehdi et al., 2018). They need to incorporate of end to end secure environment for data storage, zero trust authorization, role-based access controls & awareness of data lifecycle policies across verticals. The recent Covid-19 pandemic showed the vulnerability of medical data by exposing millions of records in the open market (Harman et al., 2012). The policies for example Health Insurance Portability

and Transparency Act (HIPAA) and General Data Security Legislation (GDPR), Digital Information Security in Healthcare Act (DISHA) are showing a Silver line towards it (Fellow, 2020). In this paper, we will see a bibliometric analysis, which is a subset of scientometric – an effective tool to discuss recent research trends, of how different research activities have happened in protecting the large volume of data in recent times. We will also see yearly research output, distribution of publication countries and institutions, most productive authors, and most citations in other published white papers and journals. Data security and various strategies accepted by industry are some of the most discussed topics in recent times. Thousands of authors are actively working on these burning issues (Mcgraw & Mandl, 2021). A Bibliometric analysis will provide a necessary valuable reference to the authors and readers to understand recent development and discussion which are revolving around the data protection concern. The expected outcome of this research activity is to obtain a wider understanding of how enterprises dealing in the healthcare sector are considering overall data governance by shaping the existing organization policies and adaptation of new security standards. This will also help the audience to develop multiple perspectives of data protection practices in the healthcare industry.

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## 22. IOT in Smart Waste Management System

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We can see the garbage bins which are situated across the cities are filled with wastes due to increase in the industrialization and human growth. It is unhealthy for the people living in and around as it leads to spreading of some deadly diseases that is why I am planning to design a “Smart Waste Management System using IoT, Where we will provide with multiple garbage bins which will be placed throughout the surroundings and these garbage bins will have low-cost sensors which helps in keeping track of the garbage in the bins. When the bins reach the device will send a notification to the authorities who are in charge of that place for removing or cleaning the garbage bins. It will be helpful for both the government and local people also as it will help them to keep the city clean and healthy. Some new features that I have thought is rather than cleaning these bins manually with laborer what we can do is we can make the dustbins movable that is automated with the help of IoT devices so that we can handle it through a built-in application or software where we can drive the bin to a dump, empty it and then can bring it back to that exact position and we can do it by ourselves or the government can handle it with the help of the software.

## 23. Emerging Trends and Scope of Healthcare Analytics

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**H**ealthcare industry is dependent on excessive amounts of data both structured and unstructured. Despite having the wealth of data, there is a lack of actionable insights as data is very complex to understand and fragmented. Healthcare analytics is coming up as a transformation in the healthcare industry which will improve the process and practices of decision making in the healthcare field and enhance preventative treatment and diagnostics. (Objective) This research reviews the use of analytics in healthcare and focuses on the present scenario, challenges in implementing analytics in healthcare setting, and future scope of analytics in this field. It includes analysis of the various technologies currently being implemented like predictive, prescriptive and big data analytics to generate precise and informed predictions. (Research Methodology) A narrative literature review approach has been adopted for the study using the academic documents published in peer reviewed scientific journals, white papers, articles and data mining of the existing records and databases. (Implications) This study aims to help the academicians, healthcare professionals and experts by keeping them in line with recent developments, challenges and future scope of analytics in the healthcare sector. (Originality) It is to analyse how analytics has been integrated into the day to day operations of hospitals to improve the patient care and how it can be further be improved , how combining new datasets with the current studies of epidemics and medicine will help in understanding the relationships between extraneous factors and human biology which will help in enhancement of the clinical pathways, personalization in the patient care and focus on the latest trends and implementation of AI, NLP in the patient care and diagnostics medicine.

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## 24. Intelligent Decision Making in Managing Electric Vehicles

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**T**he widespread use of fossil fuels in the automotive industry has led humanity much closer to the point of irreversible damage to the ecosystem. It thus has the potency to push us closer to a grim future as foretold by environmental scientists. Electric Vehicles shine a beacon of hope against this grim backdrop and can minimize the carbon footprint of the Automotive Industry. According to the Zap-Map study, it has

been found that owners of electric vehicles rarely thinking of stepping back, which is one of the primary reasons for the growing sales of electric cars nowadays. The global pandemic has also contributed to increasing electric vehicle sales due to the shift of people's mindsets of leading a healthy lifestyle and, at the same time, attentive care for the environment. However, the widespread adoption of electric vehicles has been thwarted by a few economic and technological constraints. A significant component playing a pivotal role in this regard is considering the battery powering the electric car.

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## **25. Impacts of Chatbots on Customer Experience during the Covid -19 Pandemic in India**

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**C** Covid-19 pandemic has wreaked havoc worldwide in recent months, due to which many countries including India went under lockdown causing a decrease in customer engagement. Many companies have turned to AI tools such as chatbots to improve customer experience by handling customer queries to cope with this situation. Nowadays, it has become imperative for businesses to enhance their customer experience by adopting new technologies such as chatbots that help companies answer customers' simple queries. A good customer experience ensures a positive brand image and customer loyalty. However, there is currently a lack of knowledge regarding the impacts of chatbots on customer experience during covid-19. Objective: The objective of this Research paper is to investigate the impacts of chatbots on customer experience during Covid 19 in India. Primary data was collected from 104 respondents using a structured questionnaire to gather information regarding customer experience. Data was analysed using suitable statistical techniques. The research conclusion was to identify the impacts of chatbots on customer experience and help organizations to tailor effective and efficient chatbots for their businesses to maximize customer experience and satisfaction. Originality: Very few studies have been done in this area to help analyse how companies are trying to enhance customer experience during covid-19 in India by adopting technological means such as Chatbots. This research is to understand the customer perspective towards the perceived experience of chatbots during the covid pandemic in India.

## **26. Virtual Desktop Infrastructure in computerized decision making: A comparative study using AWS cloud Vs Google Cloud Platform**

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In 2020 a virus strain of Covid 19 made the people of this world locked at their homes but it also enabled us to realize the potential of using our digital resources remotely, one such technology is Virtual desktop infrastructure. Virtual desktop infrastructure (VDI) is the creation and management of desktops and applications that allow employees to work and access applications and services outside the office, in the office, or from a remote location. Cloud Computing is the technology behind the implementation of this amazing technology known as VDIs. This research is a comparative study of implementation of virtual desktop infrastructure using different vendors of cloud which are Amazon web services (AWS) & Google Cloud Platform (GCP). This study will bring out the advantages and limitations of both VDI implementation approaches and help CIOs decide which VDI is better for the remote workforce especially in the post Covid 19 era where remote working and Work from Home (WFH) culture are on the rise. The research papers shall use case study approach highlighting the nuances of both VDI implementation. Secondary data from leading vendor online resources, business journals, and academic journals shall be used including white papers and blog reports from credible sources. Collected literature shall be analyzed and a concise comparative analysis with recommendations as an expected output. The research article shall provide a comprehensive account of how business leaders and CIOs shall invest in VDI technologies to manage their workforces remotely considering cost, agility and security challenges in expanding the IT infrastructure over cloud. Though this research article has relied heavily on secondary resources, efforts have been put to analyzed with practical and trending challenges of the IT managers with input from known sources. Hence this research is original with practical significance.

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## **27. Global Citizenship Education in Higher Institution – A Systematic Review of Literature**

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One of the vital concerns of today's world is war, pollution, inequalities between different countries and lack of familiarity of culture between different nations. These utmost issues can only be fathomed with the help of Global citizenship education. The main aim of Global Citizenship Education is to succor learners to opt an individual, national and global identity so that they will be able to partake actively in deciphering all international problems like water scarcity, global poverty, food security, nuclear holocaust, cold war among countries etc. This clamors educating students beyond geographical partition. Therefore, this paper addresses the aim of Global Citizenship Education and its role in educational institutes. This paper will also tell us how global citizenship education can make an individual a real problem solver at international level in future and will help in knowing the impact of such education upon globe. The outcome of this research indicates that GCED clasps unusual character and need exceptional education in day to day affairs. In this paper, with the help of literature review, I have proposed to merge all good scholars and specialist from every continent to traverse the current hypothesis which are instructing all the academic houses to focus on converting candidates into a true human being. The involvement of analyst from different places will also help us in knowing how GCED has a mixed meaning in different parts of the world. Afterwards, a research has been done upon the factors which GCED will contribute in making a person a real problem solver at international level and creating a sense of equality in individual with respect to different cultures.

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## **28. Economic and Technical Implications of Implementation of OpenRAN by “RAKUTEN MOBILE”**

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The Research paper talks about how Rakuten Mobile: a new challenger telecom operator in Japan competing with NTT DoCoMo, KDDI's au, and Softbank, has implemented various parameters of the Open RAN technology (disaggregation of RAN hardware and software on vendor-neutral, multiple architecture options- integrated

RAN with disaggregation at Software and Hardware level or a split RAN with Regional Unit(RU) and Baseband Unit (BBU), solutions carried out either on Virtual machine or containerized platform, implementation of Open interface between the nodes, Open RAN compatibility with 2G,3G,4G, and 5G deployments, and innovation through adaptation of technologies such as Machine learning, IoT or Artificial Intelligence ) with an unusual mix of hardware and software vendors focusing on developing a cutting-edge new network architecture in deploying the open, virtualized radio access network. The study uses the case study analysis methodology: reviews of research papers and reports, white papers, company annual reports, news reports, etc. The result analysis shows that implementing virtualized open RAN will reduce Capex and Opex, reduce less deployment time. But, for now, Rakuten mobile, though implementing open RAN, faces challenges in profit generation as the mobile network is entirely built on this new and largely unproven architecture. However, it would be a mistake to see Rakuten's challenges as a negative reflection of an open RAN at this juncture. The company affirmed its goal of becoming profitable by 2023.

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## **29. Implementation of Blockchain Technologies to Avoid Fraud in Supply Chain**

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In recent times, with technological advancements, businesses are looking at the digital transformation to create lucrative and sustainable methodologies to gain a competitive advantage over the competitors. With the awakening of consumers and stakeholders about the visible fraud in the operational activities and supply chain, the expectations from consumers regarding the supply chain are rapidly changing. Supply chain transparency, traceability, sustainability, and resilience have gained a lot of attention in recent years to end-users which potentially enables them to trace the goods and services flow and all the processes involved in manufacturing the raw materials to the final products. Maintaining a transparent supply chain has become a necessity rather than an additional service provided to the government, consumers, and other stakeholders. Companies around the globe are shifting towards technology advancements in the supply chain for effective utilization of resources, processes to gain an advantage by provisioning visibility in the Supply Chain Management (SCM). The ability to maintain an immutable, distributed, unalterable ledger, Blockchain can be considered as one of the revolutionizing technologies in digital supply chain management. Blockchain technology can be used to overcome potential threats and vulnerabilities by channelizing the flow of information thereby enhancing transparency

and traceability in the process. Its potential can drive the SCM operations less costly and enrich the customer experience through transparency and traceability.

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### **30. Applications of AI in Healthcare Sector for Enhancement of Medical Decision Making and Quality of Service**

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The objective of this paper is to know about different AI implementation in healthcare and to analyse its effect on the healthcare sector which can bring significant changes in the medical world. The impact of AI on the healthcare sector has remained less focused in academic study hence it becomes important to study Artificial Intelligence applications which can assist in different fields of medical industry and can help in decision making. Integrating AI in healthcare has been in talks but has not got the speed due to lack of research. This paper will help to address this gap by proposing a conceptual study of AI in healthcare and analyse its different uses which can help to come up with some significant solutions for the healthcare sector and help in decision making. The case study approach has been used for this study in order to collect information with respect to different applications of AI in the healthcare field where it has been successful. Since AI can definitely act as an effective complementary to the doctors in future, its implications are required on an urgent basis. This study will help healthcare professionals, medical equipment providers, academicians, government officials in developing solutions for social wellbeing. This research paper will help in boosting the healthcare sector through the proper use of AI. AI is the future and is ever growing and hence it needs to be researched thoroughly on a regular basis.

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### **31. Impact of using Cloud Computing and Artificial Intelligence in the E-Commerce Industry: Problems and prospects affecting the Customer Experience**

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This research paper will cover the area where cloud computing and AI are used in enhancing and enriching the customer experience on e-commerce platforms. Both

primary and secondary data will be used in this case to get a read on the improving customer experiences and how the use of cloud computing and AI have been increasing in the last 5 years in the e-commerce industry. Suitable statistical methods will be used to research the same. It will also throw some light on how the pandemic has been a boom for the e-commerce industry as digitalization has come into play. We will be covering both problems and prospects of using technologies like Cloud and AI in the field of e-commerce and how it is not only improving but also affecting and threatening the private and sensitive data used by them to provide a better user experience. Even though the use of Cloud and AI has improved the customer experience by making products and services more personalized but there have been some issues and threats related to large and sensitive data online and people not being aware of the risks involved with sharing too many details with the e-commerce platforms.

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## **32. Impact of 5G on the Digital Marketing Industry: Study of Selected Use Cases**

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Every Industry, today, is either harnessing the power of 5G or at least planning to do so and the Marketing Industry is no exception. This paper highlights different aspects of 5G that can be leveraged by marketers to promote their brands in a better or more effective way. This paper explores the future growth of 5G and the opportunities that it can create for Digital Marketers around the world. The paper also conducts a detailed discussion on various implications of 5G on Different Channels of digital marketing. Different 5G-enabled technologies can revolutionize how brands interact with customers. Customer Experience is of utmost importance for a modern-day marketer and 5G-backed technologies can help marketers to provide an unprecedented customer experience. The paper also highlights different use cases where 5G and 5G-driven technologies corroborated marketers to market their brands in a better and smarter way.

### **33. Internet of Things in Supply Chain Management: Concept, Technologies Used, Drivers and Challenges**

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The Internet of things (IoT) is the next generation of embedded IT frameworks that are connected to the Internet. It encompasses a wide range of technologies and devices that can be linked to almost any aspect of life or business, ranging from entertainment to national security. Supply chain is a powerful transformative force that improves efficiency and traceability while also adding more differentiation and connectivity. It tries to integrate Supply Chain Management and Logistics firms seamlessly. As a result, incorporating the growing IoT into existing IT frameworks can be very useful for an organization due to its expertise, autonomy, and widespread applications. This research paper aims to provide an in-depth understanding of: (1) Concept of IoT, (2) Emergences of IoT in Supply Chain. (3) Business Application of IoT in SCM. (4) Benefits/ Drivers for SCM. (5) Problems and risks associated with the Internet of Things in supply chain management (SCM). A narrative literature review has been adopted for this study using the academic documents published in peer-reviewed scientific journals, white papers, articles, and data mining of the existing records and databases. The implications of this research provide useful information about the Internet of Things (IoT) and its effect on applications, processes, and the structure of organizations and supply chains. Because of the disruptive nature of this technology, anticipating future developments requires identifying problems and risks. Originality- This paper tries to analyze how IoT has integrated with supply chain management to improve the quality of service and how it can be further improved.

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### **34. A Bibliometric Analysis of Blockchain and its applications in IOT and ML for Improved Decision Making**

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The fundamental goal of this research is to examine the evolution of Blockchain technology, particularly in the areas of IoT and machine learning. Decision-making has become more complex in the modern era as there are more options to pick from. This research explains how blockchain is used in the decision-making process.

Blockchain stores the data where it is highly impossible to hack or edit this data. The research methodology used is bibliometric Analysis. Bibliometric analysis is the analysis of books, articles, and other publications using statistical methods. There were a total of 18,978 publications available in Scopus from 2012 to 2021 on Blockchain. There were a total of 18,994 publications on Blockchain overall. Country-wise, year-wise, topic wise, journal-wise, institution-wise and research field wise analysis is done in this study. By the obtained data, the performance of Blockchain will be analyzed and the future of Blockchain can be predicted. According to the study, Blockchain has a wide range of applications in IoT and ML, all of which improve decision-making. This analysis provides valuable insights and adds benefit for researchers to understand the overall development of Blockchain.

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## **35. Integration of Artificial Intelligence/Machine Learning in developing and defending Web Applications**

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**W**eb application development and security have always been looked with the frame of reference of securing the web application from unauthorized user cyber-attacks. The vulnerabilities currently existing in the web application have been attributed either to using an inappropriate software development model to guide the development process or the use of a software development model that does not prioritize security as a primary concern. In recent years, vulnerability prediction techniques have mainly relied upon the availability of data labelled with vulnerability information for analysis and training. For many real-world web applications, past vulnerability data is often not available or at least not complete. Hence, to address both situations where labelled past data is fully available or not, we can use Artificial Intelligence and Machine Learning to learn and build vulnerability predictors based on hybrid code attributes. Evolving technologies primarily Artificial Intelligence and Machine Learning have changed the landscape of Web application development and application security. The present generation considers end-user engagement with the web application as one of the key priorities. This research work mainly is conducted to investigate the ways in which Artificial Intelligence and Machine Learning can integrate with the traditional web application development model and make web applications more secure and interactive.

## **36.Role of 5g Wireless Communication on Human Health & IoT**

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The 5G technology has seen strong adoption in developed countries and soon it will see adoption across the whole world. 5G offers high data speeds, ultra-low latency, and high quality of service. Over the last decade we have seen an unprecedented growth in the mobile Industry in India and all over the globe. At present the industry is at 4G which supports data rates in a few megabits-per-second and transitioning towards 5G will increase the data rates as compared to the current LTE networks by a tenfold. This increase in speed will in turn allow IoT devices to communicate faster than ever. The increasing demand to create an intelligent environment such as smart cities and smart homes is increasing at a very high pace. This research paper aims to look into the role of 5G cellular networks in the evolution of IoT. Also, it aims to compare existing wireless networks to emphasize the role of 5G IoT.

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## **37.Benefits of Blockchain Technology in Banking and Financial Sector**

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There are several benefits of blockchain for banks. The advantages of blockchain in banking have helped financial institutions find ways to complete more secure transactions and reduce errors. As a result, banks will want to consider using blockchain more often to better meet the needs of its customers. The Blockchain is an encrypted database that stores information statistics, or in different words, it is a virtual ledger of all transactions, contracts that needs to be independently recorded. This study aims to conduct research on the effect of blockchain technology on the financial sector. The study will be focused on blockchain's benefits, opportunities, risks as well as challenges of the technology in the context of banking and finance services. One major aspect in which the study will be inclined is inward remittances in banking industry. Benefits and the need of inward remittances will be studied. Increased inward remittance is a boon for the economy at both macro and micro levels. At the macro level, remittances contribute to maintaining stable foreign reserves. Remittances help Indian Rupee hold its value against the US dollar and forms a significant part of the GDP. On a micro

level, remittances have shown a positive impact on healthcare, entrepreneurship, education, and overall economic development of the recipient families.

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## **38. Cyber Security Challenges and Their Mitigation in the E-Commerce Industry**

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E-commerce is a platform where customers and firms meet on the internet to buy and sell things. It is transforming the way people transact from the comfort of home at a mouse click. The Covid-19 pandemic is testing the mettle of the entire e-commerce industry. With more and more people preferring online shopping, this pandemic is indeed a boon for ecommerce sites. However, cybercrime is also on an exponential rise, imposing a major threat. Credit card frauds, innovative phishing attacks, bad bots are a few challenges and there is a plethora of others resulting in not only loss in revenue but reputational damage to the e-commerce organization. Confidence in digital security has been essentially eroded due to major data leaks. Cyber Security is like air, vital for existence. The foundation pillars of cyber security are confidentiality which ensures that the customer's critical information like bank card details is safe, integrity which implies maintaining the accuracy and reliability of data throughout the ecommerce site surfing and transaction activity, and availability of requested data 24\*7 on the website. Ecommerce industry needs to adhere to the triad at any cost and be cyber security ready in order to ensure continuity, resilience and agility of the ongoing processes, the major area of concern is data privacy- security of customers' data. The paper discusses and analyses various types of cyber-attacks on leading ecommerce sites, and vulnerabilities frequently affecting the e-commerce web applications and suggests mitigation measures based on current industry standards.

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## **39. The Impact of Netflix Recommendation Engine on Customer Experience**

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The objective of the research paper is to find out the impact of Netflix recommendation engine on customer experience and its effect on customer loyalty and customer

engagement. The research methodology used in the research was primary research using a structured questionnaire provided to Netflix online streaming users. A sample size of 150 respondents was taken out of which 101 people answered the questionnaire. Suitable statistical techniques were used for analysis like Factor analysis using Principal Component Analysis. The paper will be providing utility to the OTT platforms, especially Netflix in gauging and enhancing the customer experience on its platform helping them lead the over-competitive and matured OTT segment. Netflix can further study the implication its recommendation engine has on its customers, helping them derive insights like how to better tune the algorithm of their recommendation engine to give its customers a better tailored cinematic experience leading to increased customer retention, loyalty, spending, and reduce churn. Despite the phenomenal results produced by the recommendation engine of Netflix by giving customers a personalized experience, such experience can often lead to the customer getting overwhelming. This can further lead to customers disliking the services being offered and switch to a competitor leading to a loss in revenue and market share. The finding is to come up with parameters on which a customer judges the quality of services being provided and what implication does it have on the decision of the customer whether to renew the subscription or not.

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## 40. IoT in Fault Detection and Prediction

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The objective of this research is to study industries using IoT with other technologies in fault detection and come up with a convenient and universal solution for fault detection. This paper will benefit practitioners, implementers, and managers in implementing it in their environment. It is a concept paper and we propose a solution to increase the uptime of the machines/systems. We will be collecting and analyzing qualitative data on the current trends of IoT in fault detection and performing our research on secondary data. We will be analyzing different approaches made tackle faults in many different industries. By analyzing the industries, we would try to come up with a universal solution to help different industries in fault detection and predicting any faults beforehand. With the help of various other technologies for example cloud computing, machine learning, big data, and analytics the usability and universality of IoT have increased. It helps us in getting real-time stats for processing and making better business decisions.

## 41. Implementation of Digital Marketing Strategy in the Gaming Industry

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Digital Marketing is a power tool that can either break or make anything it touches. Due to the current pandemic scenario, we all have learned that Digitalization is the new normal and adopting this new normal, digital marketing is “The Only Tool” for any marketer. Digital Marketing has not only changed the way how people viewed the gaming industry but has also opened new horizons for various kinds of career opportunities. Gaming industry is one of the most misunderstood and ignored industry of our modern world. Many people believe that gaming is just for lazy people who don’t have anything better to do. But what most of them don’t see is that gaming industry is the biggest entertainment industry and even all other entertainment industry combined, can’t match the annual revenue of gaming industry. I grew up playing video games and has seen this industry grow and change with time. My interest in gaming and newly developed passion for marketing, urged me to dive deeper into the world of digital marketing and how with evolution in technology and digital marketing strategies has impacted the gaming industry and brought it into the eyes of billions of people all around the globe.

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## 42. The History of Data Breaches

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This paper seeks to examine the impact of “data breaches” – “whose concerns and implications can be “legal”, “social”, and “economic” on organizations’ overall performance”. It will be Secondary Qualitative Research method as I will collect information on impact of data breaches in the organization from previous research papers and articles which are found online. I will try to analyse how data breaches have become larger in number, what are the techniques used by the cyber attackers and lastly I will analyse how this breaches can be defended and prevented. The study will help the organizations’ practice sound ideas for records structures safety governance and make powerful use of standards of appropriate exercise for protection management and to remediate the “risks and losses” related to records “breaches”, corporations might also use their “reserved funds”. This article will contribute to both principle and

exercise inside the regions of “accounting”, “finance”, and “information management” as due to statistics breaches in the agencies’ there may be a large quantity of loss within the agencies’ common overall performance.

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### **43. Consumer Decisions under the Influence of Social Media & Behavioral Targeting**

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Previously, television and print advertisements were significant players in product promotion. However, in today’s digital age, those old strategies are only one of several ways to promote any product, as technology has become an integral part of the daily lives of billions of people. The Internet, social media, and emerging marketing trends all have a growing influence on how consumers act and make purchasing decisions. The purpose of this study is to learn more about how behavioral targeting affects consumer decisions through social media or the Internet. Furthermore, to determine the extent to which they, i.e., social media or the Internet, impact consumer decision making. We used a quantitative research approach to conduct the study. A questionnaire was used to collect empirical data. The purpose of this paper is to explain how Behavioral Targeting (BT) and social media work in product suggestion and how much influence they have on consumer decision-making. The study will help us understand how targeted advertising works and overview the decision-making stages. The paper explains ad targeting, behavioral targeting, and consumer decision-making. In addition, the study examines how social media and the Internet influence consumer choices. As a result, it aids marketers in adapting to better targeting or product suggestions.

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### **44. User Acceptance and Usage of Smart Devices**

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The world has experienced a digital transformation of epic proportions in the past few years. The prospects of the Internet of Things for improving efficiency, reducing cost, achieving data-oriented predictive maintenance, and enhanced quality has now been proven well by various studies. Since everything is going online, a lot of data is

available at the disposal of organizations. Useful insights can be gleaned from these large data sets, which comprise real-time data from various devices with intelligent sensors, and seamless integration. Here is precisely where Smart Devices come into the picture. IoT and smart devices are critical enablers for higher customer satisfaction, energy efficiency, and personalization. IoT-enabled smart devices like intelligent wearables (fit-bit, iWatch), voice assistants (Google Home, Alexa), smart refrigerators, smart washing machines, etc., are becoming widespread, commercially available. People using these develop routines and become dependent on them. This entire ecosystem consisting of IoT, smart devices, technologies, and the internet is highly consumer-centric and eventually leads to satisfied and happy customers. Quantitative research involving collection and analysis of data will be carried out. Primary data will be collected by floating a questionnaire. Data from Indians (age group 18-60) will be collected using a questionnaire. Using SPSS, descriptive analysis would be carried out on the data collected to find mean, standard deviation, correlation etc. of the data. Technology Acceptance Model (TAM) is incorporated in the research to comprehend how receptive or averse are people when it comes to IoT enabled smart devices. The model used comprises of a factor, namely Social Context Factor which includes the Social Influence construct and technology factors which includes the following constructs, Trust, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). TAM will help one understand a user's Behavioural Intention to use IoT enabled smart devices. The paper would help one derive the impact of technology factors and social context factors on the acceptance of IoT enabled smart devices. The paper tries to explore the various driving factors when it comes to an individuals' willingness to use IoT enabled smart devices from different prerogatives i.e. technology, and social context. The research paper successfully extends TAM to such acceptance.

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## **45.A Decision Support Framework to conceptualize the Impact of 5G on Smart City Ecosystem**

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**5G**, fifth-generation technology, is driving digital transformation in the smart city ecosystem by allowing huge number of connections concurrently and omnipresence of the network. There are abundant discrete studies on technology use cases related to smart cities; however, the impact of 5G technology has not been significantly covered as of yet. Therefore, the aim of the paper is to understand impact of 5G technology on Smart City ecosystem and how it leads to smart decision making. A decision support framework is used to structure the process of deriving insights for better

decision making. The study explores the following aspects related to the concept; a) Applications of 5G in Smart city ecosystem b) Decision support framework for the impact of 5G in Smart City ecosystem. Narrative literature review approach has been used in which literature related to the emerging 5G technology has been analyzed with respect to smart cities. Academic documents published in peer reviewed scientific journals, reports, and articles have been used for research. The paper aims to provide insights to academicians on the use of 5G applications in a smart city ecosystem, and practitioners on developing solutions for Smart Cities using 5G technology for effective decision making.

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## **46. The Potential of Artificial Intelligence and Internet of Things in Healthcare Systems -A Bibliometric Study**

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**A**rtificial intelligence (AI) has improved quickly in terms of software algorithms and hardware implementation in recent years. The internet of things (IoT) is also quickly growing, helping to bring new capabilities and opportunities. The developments in AI and IoT are advancing at such a fast pace that, these technologies can be used in healthcare systems to improve operational efficiency and reduce medical costs. The goal of this research is to look into the potential of AI and IoT in healthcare. Bibliometric, a subfield of scientometric, is a beneficial tool for assessing research trends in various fields. With the help of bibliometric, the study tries to find the potential of AI and the IoT in healthcare systems. Between 1980 and 2021, a database called Web of Science recognized 7,263 papers based on artificial intelligence in healthcare systems and the internet of things in healthcare systems. This thesis investigated yearly research output, publication distribution by country, most efficient publishing institutions, most lucrative authors, internet of things, and AI-related research using bibliometric. This research aims to be a useful guide for researchers seeking to better understand the potential of AI and IoT in healthcare systems from a variety of viewpoints.

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## **47. Study of Augmented Reality and Virtual Reality in Online Education: Application and Use Cases**

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Covid-19 pandemic engulfed the world at the beginning of 2020, which impacted the Education Sector around the world. Institutions worldwide had to migrate from the supervised classroom training method to the unsupervised online training method. However, did the online training method have a similar impact compared to the classroom training method? This paper aims to study the application of Augmented Reality and Virtual Reality in the education sector as well as its impact on the learning process. The study aims to substantiate the inoculation of Augmented Reality and Virtual Reality in the Ed-Tech sector. An Ed-Tech giant like Interplay Learning which has made a Virtual Reality and 3-D gaming platform for an interactive learning experience, has received \$18 million in Series-B funding; similarly, Byju's has acquired Osmo, an American start-up that gives an interactive learning experience using AR/VR technology, which signifies the scope of AR/VR learning experience. Due to the Sars-Covid-19 pandemic, the students worldwide relied on online video calling/conferencing platforms like Microsoft Teams, Zoom Call, WebEx Meet, Skype, Google meet, etc., which gave them a temporary relief to their learning process and did not waste their academic year. However, the question remains, "How to enhance the learning experience on online platforms?" The answer for the present situation is inculcating AR/VR in the learning experience. AR/VR provides a better interactive learning experience by creating a simulative environment similar to an offline classroom environment. The paper will discuss various research and findings of the past and provide substantive evidence for the implementation of AR/VR in the edtech sector.

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## **48. IoT Enabled Applications for Healthcare Decisions**

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With the advent of digital transformation, technology has brought about a gigantic and momentous change in almost every industry. Internet of Things (IoT), being one of the most revolutionizing technology, has been impacting all fields of life immensely, but its impact on the healthcare industry has been particularly significant due to its cutting edge transition. The objective of this paper is to understand the

role of IoT in this sector, its various use cases, and on how the devices assists medical professionals to function more efficiently and patients for an enhanced treatment. For instance, the Intelligent Asthma Monitoring wearable technology can forecast the oncoming asthma attack way before the person wearing it can comprehend. Apple watches, though not designed with this agenda in the first place, have now been a significant part in gathering information about people with the new blood oxygen measuring functionality, echocardiogram (ECG) tracking, and also detecting irregular heartbeat which is an indicator of Atrial Fibrillation (AFib). Furthermore, the paper will also address the probable challenges of the technology in the sector and understand the current and future adaptability of internet of medical thing devices.

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## **49. Grey Decision Model Analysis of IoT-enabled Food Supply Chain using AI in Industry 4.0**

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Supply Chain Management has been severely disrupted due to COVID-19, requiring immediate action from logistics companies that want to drive through the pandemic. The Internet of Things (IoT) consists of smart devices and sensors which play an important part in analyzing storing and transferring data, referred to as Industry 4.0, the leading trend toward digitization of logistics. Since 2020, cutting-edge logistics operations have been significantly improvised by Industrial IoT (IIoT) devices, and this year marks a beginning of a major transformation in the sector of Real-TimeLogistics. Artificial Intelligence (AI) in Industrial Application has abundant usage and requires plenty of research work related to the amalgamation of AI and Industry 4.0 working hand-in-hand. This paper discusses the Industry 4.0 analysis using Grey Decision Model and how its efficiency can be improved by evolution in the field of AI and Industry 4.0 by which priorities and techniques for re-designing IoT Architecture to assist in the preparation, manufacturing, delivery, and management of Food Supply Chain (FSC) operations can be devised. Embedding the Internet of Things (IoT) into FSC operations would provide possible benefits and opportunities for the transformation of actual physical Food environment into a virtual digital environment during this Pandemic.

## **50. Identifying Factors Affecting Purchase Decision of Consumer with Reference to Offline Retail Consumers Due to Covid-19**

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Consumer behavior is critical to a product's profitability and market reputation, and it has been badly harmed by the Covid-19 outbreak. The goal of this study is to identify the variables that have generated these changes and rank them according to how much they have influenced consumer behavior. During Covid-19, an online questionnaire was conducted that generated 241 replies. The survey had three portions, the first two sections of which drew responses about factors leading to change in consumer behavior, and the third component of which featured questions related to industry sectorial analysis. Twelve sectors were picked for sectorial analysis, and a t-test was performed to see if people's spending limits had changed. Working men and women, housewives, teenagers, and students made up the majority of survey respondents, who ranged in age from 15 to 66 years old. Using regression analysis, we discovered that the component "Quality" had a significant impact on the consumer's decision to purchase a product. Also, by sectorial research, it was determined that spending limit on most sectors have been wedged excluding education sector. organizations can use this strategy to identify and implement the characteristics that their product lacks, resulting in increased sales. Individuals and companies can use sectorial analysis to better comprehend the altering conditions of various industries, allowing them to make more informed investment decisions. In a pandemic circumstance, businesses must concentrate on developing their strategy by understanding the reasons for changes in consumer purchasing patterns, which helps businesses obtain a competitive edge in the market.

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## **51. The Effect of Game Based Learning on Students using Augmented and Virtual Reality**

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Children and youth have direct access to the world of technology through video games, thus this research study will look at how we can make use of this opportunity and boost user interaction through this promising educational technology in the

EdTech sector. The methodology used is a blend of primary and secondary research to study the user preference and impact of digital gaming as an efficient learning tool from students as well as parents across India. Some common parameters like time consumption in online games and platform preferences will be analyzed by conducting primary research. COVID-19 has led to the birth of many EdTech-startups who are constantly searching for new ways to differentiate themselves. This study will be useful for entrepreneurs, venturing in this domain, and academicians as well as parents to restructure their pedagogy for a better learning experience for their students. This paper will not only talk about the impact and user perception of digital gaming for enhancing student experience but also the impact when digital gaming is blended with booming technologies like augmented reality (AR), virtual reality (VR), and mixed reality (MR).

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## **52. Impact of Artificial Intelligence: Applications, Transformation Strategy and Future Potential**

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In recent times Artificial Intelligence (AI) has climbed to the forefront of enterprises technology priorities, owing to the presence of a large amount of data at disposal as well as the rapid advances in tools and capabilities. With the growing AI adoption, some companies are capturing value and generating revenue from AI at an enterprise level, while many cost reductions are at the functional level. But with the forthcoming stage of transformation, the companies need to go the extra mile beyond the traditional digital transformation. Quintessentially, the next wave of transformation would be focused on the broad use of AI across sectors but the key focus shifting to fully leveraging its products using advanced analytics and algorithms. A case study approach has been adopted to analyze different use cases of AI adoption in some sectors and the benefits of the same. This paper will be useful for academicians and consultants in formulating AI design and build solutions. The paper provides a systematic analysis of the literature, highlighting AI implementation in three sectors which are identified by categorizing them by near-term, mid-term, and long-term adoption maturity. The paper aims to provide a synopsis of elements for successful AI transformation and help in understanding how AI can add value into four categories i.e., objectifying, generating, stimulating, and offering successful application across the Retail, Energy, and financial industry.

## **53. Detecting & Preventing Money Laundering in Crypto Transactions via Underlying Blockchain Technology**

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**A**dvancements in technology have given rise to an alternative to the traditional currencies which have their advantages and disadvantages. The anonymity of the user and the absence of a centralized regulatory body have opened the doors for criminals to launder money. So, this paper will explore the money laundering happening via crypto currencies or any crypto-asset transactions and the possible solutions to overcome it through the inclusion of KYC & compliance with Anti Money laundering from an Indian perspective. This paper mainly focuses on Qualitative and conceptual research which involves interviewing of respective stakeholders in the system, on primary and secondary levels based on which solutions will be proposed to tackle the issue of money laundering using general method and crypto currency. The outcomes of this research will help Financial Institutions, Central Bank(RBI), Regulatory bodies, Governments, Banks & Crypto currency firms in understanding the new ways of laundering the money, different ways to tackle anonymity which helps in tracking the involved parties and the efficient ways in tackling the KYC and AML compliance. India had recently revoked the ban prohibiting banks from dealing with crypto currency exchanges. But tracking of these transactions to levy taxes on them or to make them comply with the Prevention of Money Laundering Act or to update this act according to the advancements in the crime. So addressing all these issues from an Indian perspective is the uniqueness of this research paper.

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## **54. Devising Effective Emergency Response Process through IoT**

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**T**he indefinite sense of ameliorating our healthcare infrastructure paves the path for new innovation in the healthcare industry & with the same indefinite sense, the objective of this paper is to pan out an effective ER (Emergency Room) Processes using digital transformation technologies such as IOT. ER being the only facilities in a hospital which works continuously for 24X7, it becomes really crucial to consider the

challenges which makes the operations quite difficult. The system will ubiquitously help the doctors & healthcare staff by giving an extra hand in making the Emergency Medical care & services smooth. The in general supporting systems surrounding the ER services has seen tremendous development in terms of technological & as well as enhanced network structure, for example the intelligent traffic control system for ambulance, Ambulance equipped with CT scanner for Rapid Stroke Treatment & many other processes are being automated in various stages of ER [1]. All these support systems make the first response way effective but still a lot of development can be made. This paper discusses a method which makes the first response proactive from the health institute perspective by using IOT devices. The considerable amount of research that will be done in this ER service will be in the form of secondary research & could be kept in mind while considering the network development of different types of nodes in IOT infrastructure to gauge a perspective on the acceptance of platform-based ER.

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## **55.Role of Artificial Intelligence in Analyzing and Predicting Consumer Behaviour**

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Recently Artificial Intelligence (AI) has transformed business processes. One major domain of such transformation is marketing. Analyzing and predicting consumer behaviour is one of the major drivers of marketing as it helps the marketers to understand buying behaviour and predict future buying decisions to influence them. Consumer behaviour consists of all decisions taken by consumers concerning the search, purchase, evaluation, selection, usage and disposal of a product or service, which match their expectations. Marketers study consumer behaviour to discern some patterns and relationships between browsing and purchase decisions, using the data relating to browsing patterns, searches, and views. This study discusses various contemporary analytic techniques, tools and models to analyse and predict consumer behaviour. With the help of AI, vendors can learn the consumer reaction and behaviour on particular product or service and analyse the posts accordingly. The application of AI in marketing is helping various industries in improved and relevant search results, tracking experiences, curating content and better sales, all leading to strategic decision making. This study deliberates upon how AI can be used to analyse and predict the consumer behaviour. It discusses data mining, clustering techniques, and AISAS model to analyse consumer behaviour and design marketing strategies.

## 56. Implementation of AI in EdTech in Industry 4.0

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If we educate today's students as if they were living yesterday, we'd steal their tomorrow."— John Dewey. Education has been transforming itself in the last few years i.e. from Chalkboard classroom to Smart board and then to eLearning to enhance the student's skill set and learning process. There have been many advancements in Edtech because of the current technologies like Artificial Intelligence, IoT, Virtual Reality and this is going to be broadened because of the fourth Industrial Revolution, Industry 4.0 that will include cyber physical systems, IoT, Cloud computing, etc. This paper will focus on the impact that Industry 4.0 has on AI in particular with the Edtech platforms/ e-learning websites and apps. AI provides personalized learning for each student and also helps the teacher in evaluating the performance of every individual. Just like Industry 4.0 is going to provide smart manufacturing, it is also going to provide smart education by enhancing the quality of education and also by inculcating fun-based learning through educational games.

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## 57. Use of Big Data Technologies for Credit Card Fraud Prediction

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Globalization has led to an increased usage of credit cards as the mode of payment for various kinds of transactions, both online as well as offline. Just as a coin has two sides, Globalization also has another side to it – increased affinity of the Banking industry to fall prey to fraud. The main objective of this paper is to study the best methodology to predict credit card fraud accurately. By utilizing big data technologies and Machine learning algorithms (Logistic Regression, Decision Tree, Random Forest, etc.), fraudulent transactions in credit card operations can be predicted in advance to mitigate further risk. This paper outlines the best preprocessing practices for accurate results of credit card fraud prediction. The secondary mode of Qualitative research is chosen for this research paper. This study would benefit the banking industry, credit card companies, and academicians by helping them understand how algorithms can be refined to detect and mitigate fraudulent credit card practices.

## 58. Bibliometric Analysis of Internet of Things in Healthcare

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Internet of Things impacted significant growth in the healthcare sector. From pulse oximeters, blood glucose monitors to remote tracking of health. From 1999 to 2021, there have been incremental publications and research in this field. Thus, in our study, we would do a longitudinal investigation and bibliometric analysis of the Internet of Things in healthcare and identify the future vision of this trend for the prosperity of the healthcare sector. Hence, on the basis of our research we have developed a framework for convenient and secure use of IoT and health data by users and the hospitals.

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## 59. AI-powered Intelligent Systems for Disease Prognosis: A Bibliometric Study

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Today, we face enormous challenges in the prognosis of several life-threatening diseases such as infectious diseases, cancer, neurodegenerative diseases, osteoarthritis, and many other non-communicable diseases. The International Agency For Research On Cancer. Published a Glob can 2020 on December 14th, with new figures on the global cancer burden, suggesting that it has increased to 19.3 million new cases and approximately 10 million deaths because of cancer in 2020, with late diagnosis responsible for more than 70% of cases. With such rapidly rising numbers, manual detection and diagnosis have become a time-consuming and resource-intensive process. Prognosis of diseases using unconventional architectures that can predict patterns and medical images about the imminence of disease that are not traceable under manual inspection are possible with Artificial Intelligence. Artificial Intelligence-powered intelligent systems can cause the shift from disease management to precision health care intersects with another larger trend that is redefining health care - personalized, precise, preventative, and predictive care by capturing biological, clinical, and behavioural outputs refining disease detection at an early stage and predicting the likely course for the medical condition delivering care to the patient at the right time to achieve maximum health. The research methodology used here is Bibliometrics. It is a statistical analysis used to assess the relative importance of scientific output in a given field. The detailed pattern research was carried out using bibliometric

analysis, with different criteria for analysis taken into account. The expected research outcome is to provide an understanding of how AI-powered intelligent systems can revolutionize healthcare. There are three main areas to focus on: early warning and intervention, recovery and outcome estimation, and prognosis assessment, which can eventually lead to a longer expected life. The expected outcome for the researchers is to realize that AI has the potential to drive current healthcare practices toward a more individualized and precision-based approach over the next several years and that can serve as a foundation for other Artificial Intelligence-driven technology innovations.

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## **60. Augmented Reality in Agriculture**

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The World population is expected to become around 9.8 billion by 2050 and with this rise in population the demand to feed them is also growing. However, Agriculture sector is not completely equipped to fulfil these demands efficiently. Emerging technologies can help aim the sustainable and efficient ways of farming. The objective is to find the areas in which Augmented Reality can be implemented for Precision Farming. To automate the farming practices in order to gain higher yields and quality of agricultural product and to make agriculture sustainable. A secondary research is done using documents published in peer reviewed scientific journals, white papers and articles. Existing data of Agriculture sector, before and after the implementation of technologies, is used for quantitative analysis. Implications: This research paper aims to benefit the Farmers by reducing their efforts and resources in farming as well as increasing the production output and efficiency. It also aims to help people associated with agriculture (Businessmen, Scientists, Academicians) in finding a way for smart farming.

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## **61. Application of Fog computing in Healthcare 4.0: A Bibliometric study**

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Fog computing (FC) which is otherwise called sometimes as fogging, is a processing, storage, and communication architecture that employs edge devices to perform significant amounts of computation through internet routing. The fog computing

brings the computation and storage closer to the devices and by doing so, it reduces the latency, improves response time, increases data security and privacy, reduces the cost of bandwidth and in overall increases the speed and efficiency. Healthcare 4.0 is all about collecting large quantities of data and putting it to use in applications, allowing for better-informed healthcare management decisions as well as substantial cost savings. Human beings do not have enough time to consult a doctor on a regular basis about their health because of their heavy workload and lack of time. It becomes difficult for the patients to visit multiple hospitals multiple times for their examination. With Healthcare 4.0 and fog computing a large quantity of information can be processed which can generate insights about the patient's health. By using fog computing real time monitoring of the patient's health can be achieved. It makes healthcare more effective, dependable, and convenient. Individuals can self-monitor their blood pressure, heart rate, and other vital signs and take preventive measures. The healthcare industry is a latency-sensitive area, as a result, fog computing deployment in this region is critical. Better care, better treatment, and higher patient satisfaction can result from proper analytics and analysis which can be done closer to end devices using Fog. This bibliometric research focusses on the current scenario, application of FC in Healthcare in India and its relevance in healthcare 4.0. This research aims to analyse how healthcare in India has integrated fog computing to enhance the quality of their services, the developments in recent times and what are the gaps in the research. A literature review will be conducted using the academic documents published in peer reviewed scientific journals, white papers, articles and secondary research will be used.

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## **62. A Bibliometric Analysis of Blockchain and Its Applications in the Insurance Industry**

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**T**he objective of this research paper is a comprehensive study on how Blockchain can revolutionize Insurance sectors by improvising efficiency in gains and cost reductions and eliminating the duration taken for uncovering the information or fraudulent claims. This paper uses a narrative literature review approach. The critical aspect of this research paper lies in how effectively Insurance Industry is transforming and adapting to digital technology by employing blockchain in their process. In order to save time and lower their transactional costs by ensuring zero threat from cyber-attacks, which is a key area to improve their customer experience and enhance their profits by retaining the old customers with utmost satisfaction. This study benefits insurers by saving their transactional costs, eliminating fraudulent crimes, and uncovering information.

## **63. A Bibliometric Analysis of Blockchain in Banking Aiding the SWIFT**

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**B**lockchain has been considered to be a disruptive core technology. Even though its importance has been realized, the scope of research is still in its infancy. Banking sector, being a critical industry needs to rapidly adopt the technology in order to address all existing loopholes in the system. The purpose of this research paper is to explore the application of the revolutionary blockchain technology in the banking system, essentially to aid the present Society for Worldwide Interbank Financial Telecommunications network in reducing time and saving cost. The scope of the paper would be to ponder upon the existing lacuna in the banking industry w.r.t to institutional and insider frauds. Smart contracts, which are based on the principles of blockchain can be used as a potential fix to the frauds. The research methodology used in this paper is scientific literature analysis. This study would help strengthen the institutions that are involved in financial transactions across the globe. The second part of the paper deals with certain obstacles such as regulation, data management, latency, scalability and sustainability of the blockchain protocol.

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## **64. Impact of Artificial Intelligence (AI) in the Media and Entertainment Industry**

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**E**merging AI advancements will have a massive influence on the worlds of media and entertainment. While most people are focused on technologies such as Virtual Reality and Augmented Reality that are entertainment-related, the technical change of how media experiences are generated is perhaps more astounding. We speculate on how and where these technologies will have an impact on our lives. This research adopts Quantitative Method. A survey was done online taking a sample of 150+ participants. Also, a systematic review of research papers, articles related to consultation papers published by authors, second research on topics, ideas and analysis of industry experts. This article will examine some of the ways in which artificial intelligence (AI) influences the stories we consume about AI's application in media platforms. Now, the

advent of Artificial Intelligence in the media and entertainment will change the way audiences interact with movies, TV shows, sports, games and videos and discover new ways to create and share content. AI, according to industry experts, will be the next stage of industrial revolution. This paper answers the following questions: Where does AI in the Creative Industry work? What is its function? In the next ten years, how will AI change the creative industries? Utilizing AI in Media and Entertainment Industry properly will give rise to Movie Production, Automated Subtitles, Video games, Sports Broadcast, Moderation, Content Classification and Categorization, Personalization and Movie Marketing. Experts from the media industry have already realized that AI will improve its product by performing multiple repetitive tasks and providing competitive advantage over advanced technology. Comedians, media creators and content creators can spend a lot of time on their art and write and deliver engaging content with the help of AI-based automation. AI will benefit manufacturing houses in making informed decisions about marketing and advertising by analyzing the sensitive data available (1).

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## **65. Application of AI, IOT and ML for Business Transformation of the Automotive Sector**

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**A**utomotive industry is essential in human lives. It is not possible to imagine a day without driving or some public transport. Today, digital technologies are making motor vehicles and the industry more intelligent. The entire value chain of automotive business is transforming. A better connect with customers is needed. All this is possible through advanced digital technologies. Automotive companies are overhauling business processes and relationships. Legacy IT systems for manufacturing, engineering, supply chain etc. are being reinvented. This transformation encompasses software, robotics, connected devices, and artificial intelligence. Artificial intelligence (AI) made the dream of self-driving cars possible. AI will soon transform every device. Tesla, Google Waymo, and Nvidia are examples of machine learning algorithms used to detect how far different objects are, from the car. Augmented reality (AR) and virtual reality (VR) analysis enables users to watch blind spots. AI enhances security by simultaneous coordination with many sensors. With AR, VR and mixed reality (MR), automotive companies have a personalized retail platform and a competitive edge. This paper studies AI applications in the automotive sector. It studies the recent developments, and applications of AI. It discusses how companies use AI for cost reduction, market strategies, sales promotion, and even funding.

## **66. A Case Study Evaluation of Blockchain for Digital Identity Verification and Management in BFSI Using Zero-Knowledge Proof**

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The Banking, Financial Services, and Insurance (BFSI) sector represents a significant portion of any developing or developed economies of the world involving all banking, insurance, and non-banking financial institutions. This sector is the biggest buyer of identity management technology solutions and services. This accentuates the pivotal role of a robust identity authentication mechanism in the BFSI sector. The rapid proliferation of digitization in the different financial sectors, disruptive technological innovations around different services, and ever-changing user behaviors are revolutionizing the way in which the institution of this sector interacts with their customers, employees, and other stakeholders. The definition of great consumer experience has widened in scope and includes facets like consumer trust, security, real-time, etc. The traditional identity verification system like passwords, pins, biometrics, facial recognition, etc. are prone to vulnerabilities. Blockchain addresses the lacunas in the present system by using a decentralized approach to transform digital identity. The purpose of this research paper is to study the use of blockchain in digital identity verification, the benefits it brings to identity management, and different techno commercial use cases. This paper will also examine the zero knowledge proof and the role of cryptography. For this study, a case study technique was used, in which different use cases of blockchain for digital identity management in the BFSI sector have been analyzed. Academics, practitioners, and government officials will benefit from the research article in investigating, implementing, and developing solutions for digital identity verification using blockchain.

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## **67. A Research on Global and Space Communication and Security through Development of Satellite Technologies**

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Satellite technologies have always been a boon for the mankind when it comes to communication, development in security on a global level, faster accessibility etc. Through this study, it will convey the changes that the advanced satellite

technologies are bringing into the field of global and deep space communication, security etc. Through this research, some major advancement emerging from the satellite technologies are being specified. The information from the reports of various agencies in space technologies as well as communication technologies will add the base for this paper. The division of major technological leaps into this field along with the level of data analysis that has been recovered from the involvement of high-quality techniques to nurture both communication and security through such reports and online resources too will be considered. Deep space communication and even global communication requires many advancements because even till today, the deep space communication isn't that strong due to which still we haven't pushed our solar boundaries with full control. Similarly, communication at dense places on our earth when it comes to most remote areas have also been very ineffective leading to incomplete usage of the satellite technologies. The main focus will be on the business aspect taking into consideration the financial scenario too. The expense of having such advance technologies is way higher making it more difficult to implement. The techniques, equipment and the resources to imply are not that easy and feasible until a stronger framework is prepared. Even though the satellite technologies have been advancing from many decades, but the scope of emergence of new techniques, cooperation of every part of the globe, security breaches have always led to difficult paths for the satellite technologies to emerge and flourish. This research is valuable as it describes our very own existence in our universe as well as our strongest necessity known as communication.

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## **68. Plant Safety and Security using Internet of Things (IoT)**

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The paper seeks to examine the impact of IoT in manufacturing plant safety and security-whose concerns and implications can be economical or legal on an organization's overall performance. The information on plant safety and security using IoT will be collected from an online database of various plant safety and security companies. This research will help the organizations apply sound principles for manufacturing plant security and safety, make effective use of standards of good practice for plant safety and security management, and remediate the risks and losses associated with plant safety and security. The article will contribute to both theory and practices in the areas of plant security and safety.

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## **69. Usage of IoT in different areas in Supply Chain Management**

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If there is something that has seen a setback during Covid-19 i.e. the supply chain operations. A lot of physical contacts are involved while dealing in SCM in areas like production, distribution, wholesale and retail business. The world is heading towards a place where technology is acting as the epicentre of all such processes. Any human activity that you see occurring in day-to-day life has technology involved in it. Had Covid-19 not happened, the digitization boost that we have seen across the world, wouldn't have happened at a rampant pace. It played an instrumental role in acting as a catalyst to see improvisations in any field of SCM. This research paper aims to study and understand the role of the Internet of things in various processes involving supply chain management with the help of qualitative research. In the competitive environment, where customers try to find accuracy in every work possible, the Internet of Things has helped industry in achieving the desired result via better insights and data with reduced operational and labour cost.

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## **70. Role of ICT & Fintech in Indian Agriculture**

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In emerging economies and rural areas, low levels of e-literacy and digital skills, weak technological infrastructure, high costs of technology, weak regulatory framework, and limited access to services are the primary challenges in the digitalization process of Agriculture. As a result, data analytics (DA), the Internet of Things (IoT), and Fintech enhance operational efficiency and productivity within the agriculture sector. The existing IoT technologies integrate radio frequency identification, cloud computing, and end-consumer applications for future developments. Big data, IoT, and Fintech are essential technologies used for good-sized statistics and assist agricultural practitioners in recognizing farming practices and making specific decisions. Objectives: The aim is to focus on Fintech and IoT in agriculture, which features records of creation strategies, accessibility of era, accessibility of gadgets, and software gear. Many farmers witness demanding situations to access the marketplace, credit, and quality farm inputs to improve their crop yield. So, access to digital technology provides significant benefits

to smallholder farmers and different rural businesses to tap into workforce talent access support services, build a strategic partnership, which include training, finance, and legal services.

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## 71. Improving the Efficiency of Omni channel Retail Using IoT

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The world we live in is digitally connected more than ever and has greatly affected our working life. We are dealing with digital involvement in our daily lives to deal with this integration. The Omni channel method is very important. Omni channel is a multi-pronged strategy that aims to provide the customer with integrated shopping information. However, it has its challenges that need to be overcome to have a better customer experience. Major challenges include a lack of visibility of goods and metrics, sales of goods, real-time data validation, and customer loyalty and retention. All these challenges can be solved with the installation of IoT. IoT help us manage inventory, RFIDs can help us track inventory, distribution, and delivery assurance, and with IoT, we can get personalized rewards and discount coupons, which can go a long way in helping customer loyalty and retention. IoT is very powerful and can transform the Omni channel in an unprecedented way. The concept of Omni channel and IoT is focused on creating a personalized experience that can be accessed on all devices in accordance with the customer. It can be useful for both the service provider and the clients taking the service. Businesses can benefit from this in the sense that the process is more efficient, and more customer information can bring more profit to the company. The consumer comes first in the Omni channel experience, and it's no wonder that customers want to stick with companies that put them in control. It is also not surprising that sales leaders see long-term goals as the most important. Other than that, for customers, it will ease the process of giving them more options for accessing content and therefore have a better customer experience. IoT matures daily and opens the doors to improve Omni channel performance.

## 72. Study of Security Postures in Payment Gateways Using a Case Study Approach

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The emergence of e-commerce has given birth to many big and small online businesses which are operating through apps and websites. These apps and websites use payment gateways to facilitate the online monetary transactions between the business and the customer. As these payment gateways handle sensitive customer data and act as enablers for online transactions, it is most vital to pay attention to the security of their framework. The objective of this paper is to find ways to optimize the security of the payment gateways by performing secondary research and analysing all the former cases of breaches that happened at the payment gateway level and then come up with a standardized set of security measures to prevent future attacks. This paper is unique as it will help the government to find out whether the current regulations are needed to be revised and updated. The study will also aid the companies and the payment aggregators to adopt certain must have security aspects in their operation framework to prevent future breaches.

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## 73. Proposed Approaches to Implement Intelligent Automation in 5G Telecom Services

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India being an agrarian economy has close to half of the workforce employed in the agriculture sector, and more than 70% of the rural families have agriculture as the primary source of their livelihood. This sector is one of the most important industries in the Indian economy and yet it is not able to make much success due to the lack of adoption of technology in this sector. Crop failures, lack of agri-marketing opportunities, climate change, and low returns have resulted in agrarian distress in most parts of the country. Even though the government has introduced many policies and reforms, challenges continue to exist and one of the major reasons for this is the lack of adoption of technology in the agri-sector. Using technology in the field of agriculture will help in improving the crop yield and increase profitability and efficiency. Thus, utilizing information and communication technology can help the

farmers of India to make the right decisions at the right time and also to carry out the operations of their farms effectively. Smart farming, which is sensor-monitored, provides the agriculture sector with advanced information for tracking, monitoring, automating, and analyzing data. A conceptual narrative method has been used for this research to understand the importance of technology and digital platforms in the Indian agricultural sector with the focus on the analysis of review literature work and cases of different countries through argument. Secondary information is gathered from white papers, published research papers, and other online resources to have a conceptual understanding of smart farming in the domain of Indian agriculture.

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## **74. A Review of LoRaFaRM in Indian Agriculture: A LoRaWAN Based Smart Farming Modular IOT Architecture**

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India being an agrarian economy has close to half of the workforce employed in the agriculture sector, and more than 70% of the rural families have agriculture as the primary source of their livelihood. This sector is one of the most important industries in the Indian economy and yet it is not able to make much success due to the lack of adoption of technology in this sector. Crop failures, lack of agri-marketing opportunities, climate change, and low returns have resulted in agrarian distress in most parts of the country. Even though the government has introduced many policies and reforms, challenges continue to exist and one of the major reasons for this is the lack of adoption of technology in the agri-sector. Using technology in the field of agriculture will help in improving the crop yield and increase profitability and efficiency. Thus, utilizing information and communication technology can help the farmers of India to make the right decisions at the right time and also to carry out the operations of their farms effectively. Smart farming, which is sensor-monitored, provides the agriculture sector with advanced information for tracking, monitoring, automating, and analyzing data. A conceptual narrative method has been used for this research to understand the importance of technology and digital platforms in the Indian agricultural sector with the focus on the analysis of review literature work and cases of different countries through argument. Secondary information is gathered from white papers, published research papers, and other online resources to have a conceptual understanding of smart farming in the domain of Indian agriculture.

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## **75. A Study of Cyber-Defense Strategies Adopted By Major Public and Private Sector Banks of India**

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The banking and financial services sector and banking institutions across the globe faces three hundred percent greater cyber-attacks as compared to any other industry. The increasing reliance of the modern banking sector on the internet and computer technologies to operate their businesses is the major factor behind the increasing threats and security breaches in recent years. The cyber-attacks against banks increased by 238% from February 2020 to April 2020. More and more banks are adopting Cyber Security frameworks to protect them against cyber-crimes. The goal of the study is to examine the cyber defense strategies adopted by major Public and Private sector banks of India. This paper analyzes the cyber-security and risk assessment measures taken by the banks of India. The study is a comparative analysis of private and public sector banks to know what banks are doing to protect themselves against cyber-attacks. Secondary data has been taken from the reports published by the Reserve Bank of India and the Annual reports of the Top Public and Private sector banks of India. The study provides implications to Banks for assessing their Cyber-security frameworks.

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## **76. Comparative Study of Data Privacy Laws across Various Countries**

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This paper seeks to study and compare the Privacy laws that had been implemented across multiple nations; there by help in reforming the laws in our country. The sensitive data are being prone to attacks despite a plethora of research efforts on safeguarding the data and this issue has always been persistent. This paper will review all the past research work and laws that had been implemented such as the GDPR, CIPP, PIPEDA etc. to execute, analyze and hence comprehend what are the advantages and disadvantages also, how to enforce these laws in a better way in order to scale down the data breaches due to poor governance systems. A data breach poses serious threats to Governments, organizations and more importantly to a person or a citizen in general which can not only lead to data loss, but can be financial, social and most importantly

it could be a threat if the data is being misused. The challenge is to illustrate the threats, and more importantly the security capabilities and limitations of various prevention and detection solutions, in order for the government/organizations/citizen to keep their personal data intact and secure. The term “cybercrime” is still undefined. While most countries have legislation in place to address these issues, the underlying crime varies from case to case. Furthermore, online actions are unrestricted by geographical boundaries. This makes dealing with such offence seven more perplexing and difficult. As a result, significant number of cyber-crimes go unreported or unpunished. Later on this paper will also analyze the willingness of people to give away their personal information. Also, mentioning the basic practices that had been followed or have been following by the telecom industry to keep their customers data private. This review paper will also point out new research opportunities and laws that can be implemented in future by the government such as the PDP law that is still in process.

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## **77. Growing Trends in SD-WAN as Smart it Infrastructure: A Bibliometric Analysis,2011-2020**

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The purpose of this study is to analyze the evolution of SD-WAN primarily based on the ever-changing and upgrading infrastructure requirements and security solutions from the perspective of how SD-WAN solutions are being adapted in the natural industry landscape. The growing digital transformation imperatives in both large and small and Medium Enterprises (SMEs) drive the proliferation of IoT devices and related security concerns. CIOs and business leaders are looking for ways and means of exploiting new generation solutions to mitigate these challenges by embracing solutions such as SD-WAN. Through this study, it is expected that a better understanding shall be provided to elucidate SDWAN benefits. Leading vendors such as VMWARE, Fortinet and Citrix are considered in this study due to their popularity and market adaption especially in the Indian IT landscape. As it is a bibliometric study, data sources, and research articles during the last decade (2011-2020) globally. Detailed reports from the three global vendors – VMWARE, Fortinet, and Citrix shall be studied in detail about new upgraded SD-WAN products and services for the dynamic segmentations. Secondary research resources shall be used for data analysis including journals, relevant research papers and articles from global market research firms and research journals. The paper talks about the trends in adoption of SD-WAN by SMEs over the years from 2011 to 2020 and fundamental reasons behind the significant considerations in the fields of security concerns and infrastructure development. This vendor-centric study will be helpful to

understand especially by SME IT managers on how to plan, migrate and adapt to new technologies to reduce security threats and infrastructure.

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## **78. Study of Social Media Marketing Factors on Customer Engagement – Zomato**

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Over the years, social media evolved as one of the primary avenues for businesses to engage with customers and extend their marketing campaigns to wider audiences, other than concentrating on traditional media. It is an effective way to communicate the idea and promote their products as the reach is maximum and through which it is easy to measure the customer experience and customer satisfaction. The key objective of this research paper is to identify different social media marketing factors influencing customer engagement with specific reference to food aggregators. For this purpose, a factor analysis approach has been used wherein a detailed analysis of the social media factors have been taken to understand how Zomato's social media marketing influences customer engagement through various social media handles like Instagram, Twitter, Facebook, and YouTube. Primary data has been collected from 203 participants through a structured questionnaire circulated to various users of these social media handles for measuring their experiences in understanding how Zomato has been at its best of customer engagement which can improve their business. This study also focuses on various demographics in understanding the social media traits adopted by them and analysis is performed based on how these users are influenced by the content delivered through Zomato's social media.

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## **79. Decision Model for Determining Pricing in the Telecom Industry**

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The aim of this Research Paper is to discuss both the old and new pricing strategies, methods and factors affecting the Indian Telecom Industry and various brands and consumers they entail. The case made here is to understand the Pricing strategies

better and not prove or disprove any hypothesis or theory but to Pricing in an integral aspect for brands and consumers. Pricing strategy is what differentiates one brand from another and influences or tempts a consumer to purchase a product of that specific brand specifically in the Indian Telecom sector. Also, what implications does price of a product have on a consumer's behaviour. Pricing Methods essentially is derived from three main factors: Demand, Cost and Competitive Pricing. There are two basic factors that determine these pricing strategies: Invoice based and Subscription based. Where the Subscription based factor deals with either Pre-Paid or Post-Paid subscriptions and Invoice based factor with the incoming or outgoing based separately. Also, various pricing strategies are relevant in the Indian Telecom Industry which are Bundle Pricing, Skimming, Pricing, Penetration Pricing, Value Based Pricing, Cost plus Pricing and Discount Pricing. However, in recent past the pricing strategies have changed drastically and keep changing with newer technologies despite just three major players in the Indian Telecom Industry. Role spectrum auctioning, market saturation, competition and number of telecom providers in the market plays in shaping the Indian Telecom Industry ecosystem.

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## **80. Role of Artificial Intelligence in Business Transformation of the Healthcare Sector**

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**A**rtificial Intelligence (AI) is revolutionizing the healthcare sector by providing solutions to empower service providers, customers, and pharma companies to transform their businesses. It transforms the patient experience by improving health, raising life expectancy, reducing per capita cost of health care, and enriching the work experience of health care workers. Clinical practitioners have traditionally treated patients based on the limited information available and the prior experiences. Today, data available from many sources allows for a comprehensive knowledge of a patient's health. This data provides access to correct information at the appropriate time and place through modern technology, allowing for adequate treatment to be delivered. Due to these advancements in technology, there is a massive potential to utilize the abundant data available for transforming healthcare. AI applications enable the discovery of patterns and connections, and therefore the provision of insights into how to improve healthcare. This paper discusses use cases representing use of AI for healthcare transformation. The study will be of help to various stakeholders in the healthcare sector. It will also serve as a knowledge foundation for future studies by scholars and industry professionals.

## 81. Cyber Insurance and its Importance

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While cyber insurance has been around for 17 years, it is still in its maturity. It has seen solid growth in recent years, with stable margins in places like the United States. And, given the ongoing threats and accidents in the area of cybercrime, cyber insurance is likely to continue to expand globally. It came in the form of a standard insurance policy. It has just a handful of information on the quantum of payments incurred as a result of the risk event. (Pardee et al., 2015) The appearance of new technologies. The rise of cyber-threats has resulted in a much more challenging landscape and insurers are no longer expected to simply have coverage not only to cover the consequences of the incidents, but also to help in the avoidance of them. Cyber-insurance is the transfer of financial risk connected with network and computer accidents to a third party. Cyber Insurance is now transforming the IT in public and corporate sectors. The appealing outcomes by Cyber Insurance when involved with IT is making the organizations, stakeholders understand, shape and secure the future of IT organizations. Cyber Insurance is intended to cover costs, commercial losses, company loss, as well as fines and penalties related to Internet-based threats. In the last five years, cyber insurance has developed into a multibillion-dollar market with the power to set and implement security standards. Cyber-crime-related annual losses are equivalent to US\$500 billion, and they are forecast to quadruple to more than US\$2.1 trillion by 2019 (KPMG, 2018). Despite this, annual global cyber premiums are projected to be worth US\$2.5 billion. According to estimates, 60% of top 500 companies are currently uninsured against cyber incidents, Insurance solutions (Deloitte, 2016). This is where cyber insurance will help the organization to protect themselves. It plays important role in protecting organization financially, physically, and even image of the organization.

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## 82. Analysis of Social Media Marketing on Consumer Involvement

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The fundamental purpose of the study is to measure the effect of social media marketing on consumer involvement. Many organizations invest a massive amount of money in social media marketing, thus measuring the effect remains a challenge for most organizations. However, social media sites facilitate active communication

between organizations and users. Therefore, the need arises to find out the factors, which is impact on consumer involvement. The method used for the data collection is through the questionnaires distributed to the particular sample size of around 150 to 200 people randomly. The analysis will be performed on SPSS using different techniques such as factor analysis to examine the relationship between variables used in the study. Based on the factors used in our study, there are several factors that have a significant impact on consumer involvement. The campaign used by organizations boosted consumer engagement and helped them to improve their sales and revenue. The findings revealed that content, media, and posts posted on a brand page of an organization had a substantial influence on consumer involvement. It also stated that the more the impact of social media marketing, the greater the level of consumer involvement. The research provides valuable insight into real-time consumer feedback facilitated by social media, enabled the understanding needs of the consumer and, improve consumer loyalty.

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### **83. Millennial Purchase Decision and Instagram Influencers an Empirical Study**

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The gen y members have become working professionals, and this has provided the marketing teams with a new cluster of consumers who are more exposed to the world of the internet than any of the previous sets of consumers the marketing world has witnessed. Businesses have been leveraging this very attitude of the millennials to promote their brands on social media platforms through influencers, who already have a built-up audience of a few thousand or more followers on social media platforms like Instagram, Twitter or YouTube. Influencer marketing has been an up surging way of targeting new consumers. Millennials follow nearly three-quarters of influencers on social media, and the majority say social media is where they discover new things they're interested in. This research paper intends to emphasize the impact of influencer marketing on the attitude of millennials with special reference to Instagram. The approach towards this research involved primary data which was collected from postgraduate students through surveys and questionnaires. The secondary research involved journals, articles, web resources and blogs. The objective of this study is to provide managers and brand owners with valuable information about how influencer marketing affects millennial attitudes.

## **84. Impact of IoT on Banking and Financial Services**

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The Banking and Financial Services and Insurance (BFSI) sector in today's time is highly dependent on technology for various transactional activities. With increase in smart devices that enable customers to make payments or authorize transactions more conveniently, IoT seems to be a major enabler for these domains. IoT, paired with other latest technologies like blockchain, ML etc has made the process of using smart devices more practical and secure over time for financial transactions. The objective of this paper is to understand the impact of IoT applications on Banking and Financial services by studying the applications cases, benefits, and future scope of IoT technology in the BFSI sector. The research paper is aimed towards helping academicians and practitioners to understand the current applications and benefits of IoT in the BFSI domain. The paper will include a study based on use cases of IoT in BFSI sector, providing insights about the impact it is making as a technology to the sector.

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## **85. Improving Agricultural Productivity: Use of Automation and Robotics**

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In the last few years, it is seen that robotics have been extensively adopted in the agricultural industry to enhance its productivity and competency. New trends and researches focus on the agricultural field of robotics that looks forward to building a group of small-scale robots that will collaborate to optimize farming practices. This research paper emphasizes on the deployment of robotics and the use of automation in agricultural applications. It explores the practicality of these robots towards agricultural development and also the perspective of farmers on such robots used. Analysis of the data collected from certain surveys of farmers on the use of robots and automation in farming is used to find a descriptive result of a future perception of agricultural industries. Application of such Agri-bots for different methods of farming and the relation between farmers and automation is collected from secondary data retrieval. There are different robots and different levels of automated machinery used in the agricultural industry, along with farmer's point of view on robots, the paper

will be covering the different Agri-bots that are deployed and automated for specific agricultural methods. Implications of the study: This paper will be useful to the agricultural industries, and will give a clear idea of the level of investment that should be implemented on automated guidance systems and robots in farming with respect to the decrease in farmers and increase in automation. The paper discusses the farmer's perspective on automation in farmer. It gives a glimpse of whether the farmers are sceptical about the safety and terms of reliability in using these agricultural robots on their land. This paper will also include the number of human interactions between these autonomous machines and robots. The number of such robots with different levels of human dependency and full autonomous functionality will be discussed.

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## **86. Opportunities and Applications of IoT in Logistics with Reference to Pharmaceutical Industry**

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The implementation of Internet of Things (IoT) is revamping the world and transforming the competitive landscape. IoT is considered one of the most critical business growth drivers. This paradigm shift allows us to connect physical world objects in our environment to the global network. The pharmaceutical industry is harnessing the power of IoT to improve its logistics systems. For pharmaceuticals firms, the advantages of real-time data are immense as it leaves no scope for error in the production process as well as in delivery standards. IoT technologies attempt to override the risk factors associated with the overall supply chain of the pharmaceutical network. The research paper aims to explore how the pharmaceutical industry is leveraging the IoT network to optimise its logistics operations. It further explores the role of IoT in alleviating the difficulties and challenges faced by pharmaceutical industries in logistics and suggests additional solution strategies for identified challenges through the implementation of IoT. The study has implications for practitioners in terms of designing and implementation of IoT infrastructure to reap its benefits, for managers in terms of designing pharmaceutical companies' information technology strategy, and for academicians in terms of exploring how the Internet of Things (IoT) is transforming pharmaceutical logistics to improve efficiency.

## **87. Applications of Artificial Intelligence and Machine Learning in E-commerce**

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**A**rtificial Intelligence and Machine Learning are emerging technologies that are now used by different businesses to enhance the customer experience. The use of these technologies has provided many opportunities to organizations to boost their market performance. The research paper aims to understand the impacts and applications of Artificial Intelligence and Machine Learning in the E-commerce sector and how one can leverage e-commerce business performance using these technologies. A qualitative analysis approach was taken. Literature review was used to analyze the academic documents written and published in peer-reviewed scientific journals. The study will help E-commerce players to understand consumer behaviour and patterns and personalize the shopping experience. And how predictive analytics can be combined with these technologies to increase their performance in terms of Sales and Revenue Growth, Customer Experience, Customer Acquisition and Retention.

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## **88. Intelligent Data Management to Facilitate Decision-Making in Healthcare**

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**T**he advancements in digitization are transforming the healthcare industry, one of the prominent industries producing critical data through patient care. The management of structured and processed data is becoming a challenge. Collecting, storing, and analyzing the data by efficiently reducing the complexity of data management makes the healthcare industry one of the most valuable industries. Creating meaningful and accurate disease predictions is critical in the health care sector. A study was conducted using VOS viewer software, which led to four clusters of keywords from different domains based on occurrences and relevance taken from 1500 documents from 1995 to 2021 from Web of Science. These keywords were mapped to the fields impacting the data management in Healthcare to explore the potential problems based on several types of research to establish a framework with an exploratory analysis. The methodology applied in this bibliometric analysis describes the progress

in data management in healthcare and can let researchers, scholars, and healthcare professionals gain insights for facilitating the healthcare decision makers.

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## **89. Endpoint Security and its Importance during and post Covid-19**

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Complexity is nemesis of cyber security. As the systems are becoming more and more advanced day by day, they are becoming more complex as well. One of the important aspect that increases the complexity of a network are the endpoints. The sudden growth in malware attacks, phishing, suspicious mails, rat attacks, key loggers, etc due to use of personal devices, BYOD which has made all the organizations all over the globe to think and act on the endpoint security and has resulted in increase in revenue of cyber criminals also. Endpoint security being the most vital part in any size of the organization is now unfortunately becoming the weakest link in the security chain and becoming a threat of huge information leak. Many Organizations have realized the fact that the working mode has been changed almost to work from home since the COVID pandemic and they need to focus on strengthening the loose ends i.e the endpoint security so that data can be safe and can be encrypted to the end user and reducing the threats to the organization.

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## **90. Big Data Analytics in Agriculture**

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Data analysis is entering every sector and is acting as boon by handling massive data, minimizing losses and maximizing yields by various predictive models. Agriculture is one such developing sector where huge amount of data is produced and if analysed effectively can benefit agriculturists, farmers and eventually government. (Objective) Monitoring appliances, automated-drones, and sensors such as soil sensor, humidity sensor. They are generating large volumes of data to support data-driven farming. Due to uncertain weather conditions such as irregular rainfalls, soil quality, crop yield is highly affected. Big data analytics aims at storing and analysing data generated

from various IoT devices, sensors to predict rainfall patterns, fertilizer requirement and provide the most appropriate information to farmers by decision making algorithms. his paper reviews the use of Analytics in agricultural sector. A literature review will be conducted using the documents published in peer reviewed scientific journals, white papers, articles. Existing projects and previously implemented projects on implementation of big data analytics in agricultural sector across the globe will be referred. The research paper aims to assist farmers to achieve higher yield by minimising losses due to unforeseen circumstances. The ultimate objective is to assist farmers, agriculturists, and scientists adopt beneficial farming practice. The research paper aims at delivering quantitative data along with qualitative data via predictive models and algorithms and other crop risk related solutions.

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## **91. Investment Decision in Cloud Gaming-Based Businesses Opportunities: An Analysis of the Cloud Gaming Industry**

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Cloud gaming is a form of computing that combines cloud computing with computer games. It has several advantages over other types of gaming, the most prominent of which is developer ease of development/deployment. Consumers don't have to spend as much money on high-end devices to play games because cloud games can work on thin client devices. This paper seeks to provide a quick overview of the existing cloud gaming industry and its SWOT analysis by referring to all previous studies on the subject. This study also intends to compare cloud gaming platforms based on their delivery services as of the research data. This study will also identify overall challenges and risk of cloud gaming and how can we overcome it with the collaborative approach using latest technologies.

## 92. Blockchain-based Decentralized Finance: Revamping the Traditional Financial Ecosystem

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The traditional financial industry has neither been innovated at the speed it should have, nor has it been able to include many parts of the world's informal financial system. This has made the life of those who are unbanked extremely difficult. The growth opportunities have also been extremely limited for them. Cases like Harshad Mehta Scams highlight the numerous loopholes in traditional banks and their questionable lending policies. This comes as a threat for users of these institutions. Decentralized finance solves these issues by providing more transparency, accessibility, security, and trust. Anyone with an internet connection and a user-facing application or design can access these services like lending, borrowing, staking, and crowd funding. The transactions are also irreversible. Around 2013, people started realizing that blockchain can be used for much more than Peer to Peer (P2P) digital currency transfer. Some of the utilities are smart contracts, financial agreements, and registries about identity.

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## 93. A Comprehensive Study of Classification of Phishing Attacks & its AI/I Detections

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Phishing is a cybercrime in which an attacker sends a phony ("spoof") communication in the hopes of duping a human victim into divulging important information. These attacks entail distributing fake websites, links, and messages to users and then manipulating and acquiring the information (including login credentials, credit card numbers, and unique personal identification) solely for malicious intent. There is a need for an hour to understand phishing attacks as these attacks are evolving and also as the attacks are becoming more intricate and rampant, this results in more people falling prey to such scams. To prevent such instances, a smarter detection system manned by artificial intelligence and machine learning is used. This research paper aims to start the discussion about phishing attacks by understanding the different types of vectors and methods through which these assaults are carried out. Also, pointing out the necessity of the implementation of intelligence solutions in the organization's

cyber security infrastructure. Through this, the author seeks to provide greater insight into the types of phishing attacks and their identification, detection, and the provision of existing AI/I solutions to defend the organization against the said malicious attacks.

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## **94. Analysis of Cyber threats and Cyber security Of IoT Devies**

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The growth of Internet of Things across many sectors has raised security risks to IoT devices and systems, resulting in an internet of vulnerabilities. In 2021, around 35 billion devices will be connected to the internet. IoT devices account for 37.72 % of infected devices, which means that their portion of the entire breakdown has grown by 100 %. The main objective of this research paper is to identify and analyze the potential threats to security of IoT devices through notable IoT breaches that has happened so far and the cyber security measures that should be taken to mitigate these challenges. The aim of the research is to determine the attack vectors and major security threats that exist for IoT devices. The focus of this research is to provide greater security granularity at each layer. Through a 6-layer security architecture framework that can be adapted as per the requirements. Security measures must be applied at each layer to meet overall security requirements. This paper will follow the case study approach in order to collect information with respect to various cyber threats and the security measures that are hampering the data collected from IoT devices in today's world. This paper will provide discerning understanding of application security to industry professionals as well as academicians as the current industry 4.0 is more prone to security threats. Because IoT devices generally store data in the cloud, application security needs special attention. This data frequently comprises a user's personal and confidential information. As a result, protecting data is no longer limited to safeguarding the local system on a network boundary. As the world is transitioning towards extensive use of smart devices, which are generating enormous amount of data and thus creating new cyber threats every moment. This research paper will help in boosting the knowledge about the current scenario and the coming advancements in cyber security.

## **95. Adoption of Augmented Reality Mobile Apps: Analysis of Poularity**

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The increased availability of mobile devices has changed various industries and will continue to improve how information is processed in the future. Because of its improved mobile capabilities, augmented reality has become increasingly popular. The AR market is expected to grow at a rapid pace in the coming years, with some of the largest names in tech industries leading the way. Companies who want to stay ahead of the curve should at the very least think about how augmented reality could be integrated into their operations. Many smartphone applications have recently implemented Augmented Reality in different functional areas; the objective here is to investigate the various areas of Augmented Reality applications and to assess its success and potential in various fields. This paper will also provide an overview of Augmented Reality and analyze its potential and popularity in different functional areas. It will assist businesses, entrepreneurs, app developers, etc., in determining if Augmented Reality applications are appropriate for the functional area in which they are operating and might help them gain a competitive advantage.

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## **96. The Impact of Omni channel Retailing on Consumer Decision Making Process**

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Over the last few years, the touch point between the companies and consumers has to proliferate with the evolution of technology, and the expansion of the internet has affected consumer behavior. Now companies can reach the customer through different marketing channels that impact the consumer decision-making process. Companies are now using diverse sale channels, Omni channel, to provide consumers a unified shopping experience. For designing an integrated experience, each channel is working in conjunction - the customer may be purchasing from a brick-and-mortar store or online via smartphone, and the background will be smooth. This paper involved primary research in the form of a survey to know the influence of omni channel on consumer decision making during their customer journey, also furthered secondary

research conducted for better understanding and a literature review done using the academic documents published in peer-reviewed scientific journals, white papers, articles and data mining of the existing records and databases. This paper would be essential for retailers to understand customer behavior and help them connect to new customers by knowing today's business requirements. The findings of this research paper showed how much consumer decision-making gets to influence and the experience they get due to the presence of various modes, information sources, and available alternates.

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## **97. A Study on the impact of 5G on the Banking Industry: An Economic Impact Perspective**

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**M**any banking and financial institutes have begun to cooperate with recent trends and technologies to improve services in the recent era. The emergence of 5G technology provides banking and financial institutions with new choices. The impact of the 5G ecosystem on financial enterprises and mobile banking is noticeable. 5G will help modernise the banking and financial sector as part of the telecom revolution, and will be a driver for exponentially increasing clients and market share for financial institutions and financial technology. 5G is expected to increase real-time mobile commerce and high-frequency commerce, according to the financial services industry. Here in this study, we have tried to present an overview of Banking 4.0, Branch-less banking and Open banking and how 5G will help achieve it. In this paper, we have tried to aggregate insights from various sources related to 5G use cases from the perspective of the Banking Industry both from Indian perspective as well as the world.

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## **98. Intelligent and Efficient Decision Making for Telecom Proceses**

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**T**he upcoming trend that has been observed over the years is to automate the most repetitive and mundane tasks to reduce waste of labor, eliminate human error and

reduce costs. The process is known as 'Robotic Process Automation' i.e., 'RPA'. Now, 'RPA' refers to the usage of trending technologies in the form of software bots and program them to automate the most frequent and monotonous tasks. This is done using a very effective process known as Process Mining. This research paper primarily attempts to understand the implementation of 'RPA' and process mining specifically in the telecom industry and how they leverage these technologies to improve their costs and process efficiencies. A case study & use case-based approach has been adopted for this research paper wherein use cases within the IT industry have been analyzed w.r.t benefits accrued because of adoption of such technologies. Process Mining is a technique that helps in analyzing and monitoring processes. This works in tandem with 'RPA' to automate the process and improve cost and process efficiency. The telecommunication industry deals with heavy volume of operational processes like increasing agility, managing data, and developing new services/models. This study will be useful for the practitioners of these technologies, the IT sector companies and academicians to understand the Grass root application of such technologies.

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## **99. A Comprehensive Study of End User Awareness of Cyber Security, In A D2C (Direct 2 Customer) Business Scenario**

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This research paper is aimed at benefiting both the end-users (customers) as well businesses. It is not only confined to the aforementioned parties, rather extends its impact on a wider range of stakeholders, e.g., government, shareholders of the businesses, etc. Businesses operating with a D2C business model tend to have a cyber-security management strategy within their business, but lose control once the threat extends outside their business purview. Once a successful order is delivered, it is no more a business's responsibility to assess how vulnerable end-users still can be. This is where this research paper can create a substantial dent by trying to understand the potential cyber security aps that exist at the end users and in turn formulate an easy-to-understand and abide by cyber threat mitigation program for the customers.

## **100. Disrupting the Traditional Marketing Process and Decision Making Using Augmented and Virtual Reality**

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In recent years, the world has experienced cutthroat competition in every industry, including marketing. Companies are employing advanced marketing innovations in order to become more accessible to current and future consumers and distinguish themselves from their rivals. The field of marketing has been catalysed by digital disruption. Experts believe that Extended Reality (XRs) which includes technologies like augmented reality (AR), virtual reality (VR) and mixed reality (MR) are promising technical resources for selling goods by offering virtual user interactions that mimic those encountered in physical usage. We will use qualitative methods in this research paper to examine how augmented reality and virtual reality are challenging the conventional marketing funnel, as well as observe the transformation of marketing strategies through the analysis of recent use cases. This research paper aims at assisting marketing managers in comprehending the recent change in conventional marketing strategies and how incorporating expanded realities into their campaigns will benefit them in achieving successful optimum marketing, improved product exposure, and increased revenue.

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## **101. Role of Big Data Analytics in Media and Entertainment Industry**

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The entertainment and media industry is seen to transform at an unparalleled growth boosted by the need to alleviate the maintenance cost and to produce sales by increasing the subscriber base in a highly challenging and volatile environment. With the increased use of mobile phones and electronic content, a rising number of customers are getting exposed to the world of amusement created by technological innovations. A wide consumer base implies an enormous amount of information which necessitates the use of big data analytics for obtaining a deeper understanding of services offered in these industries. The use of business intelligence aids the multi-media sector in obtaining detailed insights not only into their consumers but also into

their structures and processes. With the increasingly changing needs of the consumer, big data tools can be used by the content creators to generate new practices and create opportunities for producing higher quality content to suit the demands of the consumer. The media and entertainment sector are early adopters of big data technologies as it allows them to push digital transformation by using data that is not only already available but also introduces them to new data sources within and outside this business. This research paper presents an in-depth analysis of the technology in the media and entertainment business. It elaborates on how goods, consumers content, and processes are influenced by the dynamic consumer and industrial needs, the application scenarios, and other aspects of the sector.

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## 102. IoT in Farm Productivity Enhancement

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With the changing climatic conditions, variability in the number of resources in different geographies, decreasing land resources, limited irrigation supply, rising prices of inputs, and increasing stress factors, there is a need for sustainable agriculture practices. Deploying embedded physical micro sensors, nodes, software and electronic components together forming an ecosystem to track and monitor the health of the crop and weather to digitize agricultural practices. Usage of automated sprinkler systems into agriculture would have saved up to 24% of water used in cultivation of rice per hectare as stated in this paper. The implementation of IoT in agriculture helps in evaluating irrigation needs, crop conditions, predict weather forecasts, and allow the farmers to take precautionary measures. Monitoring farmlands using IoT system and networks of devices allows remote sensing with real-time data and the studies mentioned in the paper have shown positive results with respect to precision farming and irrigation.

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## 103. Intelligent Decision Making with Block Chain in Healthcare Industry

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Blockchain technology is one of the most path-breaking achievements of the twenty-

first century, and it is being used in almost every industry. Blockchain technology continues to revolutionize and change the world. Countless opportunities can be created by this technology, as it is not so complicated at its roots. The Peer-to-peer connection is the best part of this technology up till now. In the Healthcare industry, many loopholes are directly connected to a patient's life directly or indirectly. But this highly encrypted technology has the potential to solve these problems. Hence this study tries to address the gaps by proposing conceptual models for understanding how Blockchain technology can solve all the critical issues like faulty medical diagnosis, legal compliance, and fraud currently present in the healthcare industry. This study provides implications to practitioners to study and develop new Blockchain technology-based healthcare management application and supply chain management systems such that they can directly impact patient's life and solve the loopholes currently present to the society as it will help improve the drawbacks of the healthcare industry, therefore, leading to more safe healthcare options. This study would omit patients' critical medical information and supply chain management-related gaps in the healthcare system by using this technology. This paper will illustrate conceptual models of a blockchain based healthcare management application and a supply chain management solution blockchain backed, also this paper shows how these new implementations might improve the industry/system. This research paper will aid in the advancement of the healthcare industry through the correct application of artificial intelligence.

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## **104. Study of Cyber Security Threats to Online Social Networks**

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**A** social network is a social system made up of individuals or organizations that are linked by one or more types of duplication, such as relationships, shared interests, financial transactions, belief systems, data, or status. The purpose of this research is to study and analyze the cyber threats to online social networking sites, capture the history of online social networking websites, identify their styles, and discuss cyber-attacks collaboratively, provide ways to combat risks, and imagine the long-term dynamics of those websites. Researchers will analyze secondary research done by journals, systematic literature review of research papers, relevant documents, and consultation papers published by regulators. The researcher will be doing quantitative research to collect and analyze the data of 250 to 500 users of social media. The study analysis will look at the risks of privacy from various aspects of social networking and divide the work various categories: social and privacy graphs, profile and security credentials, confidentiality and geography, and promotional programs and privacy.

The paper understands various issues in regards to consumer privacy concerns on social media. Social networking sites are not the only way to communicate with people all over the world or to travel with them, but they are one of the most successful ways to promote a business. The paper also covers the varieties of risks that can place social media users at risk of cyber protection. This paper contributes to our interpretation of social networks, as well as the secrecy of non-public data and the investigation of identities. The data leak, misconfiguration, account hijacking, and malicious insider attacks are among the most popular network security threats.

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## **105. Study of Attitudes and Behaviours towards Cyber security in the IT Sector**

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The growing cybersecurity risks have been a major area of concern for the IT industry. Cybercriminals tend to target companies with a huge workforce where the repercussion of the intrusion is substantial. The focus of this research is to see if there is a difference in cybersecurity attitudes and behaviors between gender groups. The study is made with employees currently working in the Information Technology (IT) sector by evaluating their awareness level towards cybersecurity and assessing the attitudes and behaviours. A total of 103 respondents were asked to complete a survey questionnaire. The questionnaire consists of two Likert-type response scales, one of which assesses employees' attitudes regarding cybersecurity and the other of which assesses their participation in risky cybersecurity behaviors. The results of the study indicated that as compared to men, women reported better cybersecurity attitudes and behaviours. The outcome of this study helps to build a bridge for cybersecurity knowledge among employees and companies, also, establish gender-specific cybersecurity awareness programmes and behaviour models in order to enhance employee attitudes and behaviours.

## 106. Predictive Analytics Techniques for Personalized Customer Experience

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**T**Marketing has always been seen as more of an art than a science, and marketing analytics has mostly served to demonstrate marketing's commercial impact by evaluating awareness, interest, and campaign results. However, now new markets are opening up as a result of e-commerce and digitization. Young businesses have the opportunity to expand, and unique consumer relationship views are emerging as a result more customization options are demanded by customers. Simultaneously, businesses have access to new and, in particular, more information on their customers. A vast amount of data is collected about customers in big data, and customers are then categorized using algorithms such as identification models, clustering models, propensity models, automated segmentation, and collaborative filtering after they have been evaluated using Predictive analytics. Marketers can now not only account for campaign results but also construct models that forecast marketing outcomes with a high degree of accuracy, thanks to the evolution of advanced analytics. The objective of this study is to discuss the predictive marketing analytics concept and techniques for personalized customer experience. It will give readers an overview of how predictive analytics insights can help improve the accuracy of consumer identification, the performance of customer acquisition, and customer retention through a variety of predictive applications. A narrative literature review approach has been adopted for the study using the academic documents published in peer-reviewed scientific journals, white papers, articles, and data mining of the existing records and databases. This study aims to provide predictions for marketing managers and experts regarding the predictive analytics environment, applications, and future scope of analytics in the marketing sector. It proposes that consumers are ready for a new journey in which AI-based predictive analytics is a tool for endless options and information that are narrowed and curated in a personalized way and explore how predictive analytics techniques-driven personalization technology can accurately determine consumer preferences and add a cognitive component to the otherwise traditionally human-powered and automated tasks. This paper investigates the literary corpus on the role of Predictive analytics boosted Personalization in the age of dynamic customer needs and environment.

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## **107. Studying Human Behaviour, Perception and Cognition to Controlled Stimulus in a Virtual Environment**

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The purpose of this White paper is to explore the possibilities of using virtual simulations as means to carry out controlled experiments on humans to study human behaviour, perception and cognition. Traditionally biological cybernetics exposes subjects to man-made controlled environments to study and research their action-to-perception loop which influences any human behaviour, Virtual Simulations allows a drastic improvement in feasibility by underlying a completely independent research framework, which would constantly track people without the need of a physical lab environment. The study employs Experimental & Qualitative Research methodology. Introducing a select sample population of candidates to a controlled social environment in a virtual simulation. Studying correlation in both the cross sections of the data by observing the users' instinctive responses to various controlled stimulus in the environment. After several hours of emersion into the virtual world, the candidates will be interviewed in depth about their experience in the virtual world, which will be followed by an analysis of the players actions in the virtual world and his preferences in reality to reach a conclusion which tells us the extent of correlation between human behaviour in a virtual world and the real one.

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## **108. Augmented Reality of Online and Physical Retailing: A Study of Applications and Its Value**

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The retail industry has become smarter day by day and providing greater value to both consumers and retailers. Augmented Reality has appeared as a fast development technology used both in physical and online retail to improve the experience of shopping and sale of products. This research paper primarily attempts to identify and analyse increased reality applications in physical and online retail, and the value provided to consumers and retailers. A narrative literature review approach has been adopted for the study using the academic documents published in peer-reviewed scientific journals, white papers, articles, and literature search. This paper is equipped with a general description of the theme that is relatively new, but appears drastically

which has not been examined yet. It fosters areas for additional analysis and profit for retail scholars and practitioners. This research also provides retailers important practical implications of AR technology.

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## **109. Role of Artificial Intelligence in Business Process Transformation**

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**M**arkets today are increasingly dynamic, and companies with rigid business processes find themselves at a distinct disadvantage. Customer sentiments change quickly, even before companies get a chance to redesign their business processes and implement any change to their products. Many companies have been migrating their business processes to a more flexible, outcome-driven approach to make the business processes more efficient and agile. They are transforming them with advanced digital technologies like artificial intelligence (AI), machine learning (ML), and robotic process automation (RPA). RPA has now progressed to the point that it can now be employed in large enterprise-scale deployments. Intelligent Automation brings together RPA and Artificial Intelligence (AI), and has enormous transformational potential in the near future. The paper aims to study the adoption of AI in Business Process Transformation, understand the impact and benefits of these technologies and their potential commercial applications. A case study technique was used for this research, where numerous use cases in the IT, Telecom, and Finance industries were analyzed. The study will discuss the business processes as well as how intelligent automation can be adopted. It will thus help provide insights to managers across various industries in transforming the business processes.

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## **110. Building Business Resilience and Productivity in the Healthcare Industry with the Integration of Robotic Process Automation Technology**

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**A**utomation is a game changer for Digital Transformation and RPA is the fastest-growing type of automation in the industry today. Companies look to automation to

drive resilience and they drive down the costs and improve the daily work lives of the employees. Industries across all verticals are conceptualizing their respective business models with the implementation of RPA Technology and thus making significant development especially with the impact of COVID 19. These solutions might bring about more enhancement of productive activities that will fuel the healthcare industry as a whole. This is because these solutions provide several advantages to businesses in the healthcare sector, such as reducing excessive spending on administrative services. RPA is important in the healthcare sector because it monitors real-time data and responds rapidly to emerging business threats.

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## **111. Economic Implication of Spectrum Bands used in 5G: A MultiCountry Study of Spectrum Allocation**

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**5**G technology is the latest and prevalent nowadays, not only in the field of telecommunication but in every sector such as health care, automatic transportation, smart cities, governance, agriculture, and whatnot. The role of 5G would be crucial in the growth and development of each sector and industry. 5G is an advanced wireless communication technology that uses various frequency bands for various purposes and applications. 5G would play a crucial role in low latency, enabling critical communication and offering significantly higher speed for massive IoT. The 5G system does include Ultra-Reliable Low Latency Communications (URLLC), enhanced Mobile Broadband (eMBB), and massive Machine Type Communications (mMTC). The ranges of frequency bands are basically divided into three-level, High frequency bands, medium frequency bands, and Low frequency bands. The paper discusses various frequency spectrum bands that 5G is/will be operating over. A detailed study of some countries with cross-country comparison, a comparison of 5G parameters considered in the allocation of 5G spectrum bands, a study of 5G spectrum allocation status, and recommendations for spectrum allocation in India have been made.

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## 112. Understanding the Impact of Artificial Intelligence in Project Management Decision Making

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The research aims to see how Artificial Intelligence (AI) might help project managers. Artificial Intelligence advancements have lowered the requirement for human intervention in repeated rule based tasks. This will free project managers to concentrate on higher-value customer opportunities and stakeholder management rather than monotonous operational tasks. AI also aids in project decision-making and recognizing talents. It contributes to a guarded working domain. Apart from that, it aids in maintaining constant attention and impartiality. Furthermore, it is being utilized to create a knowledge management ecosystem. The initial unstructured search will define various methods and objectives applied to project management in the artificial intelligence sector. The primary aim is to describe the algorithms being used and see how Artificial Intelligence (AI) might help project managers. A systematic review based on these findings to decide how algorithms of artificial intelligence are implemented.



## 113. IoT solutions for Electric Vehicles (EV) Charging Stations: A Driving Force towards EV Mass Adoption

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The world is currently moving towards a pollution-free traffic and Electric Vehicles are gaining more marketability across the world. The global EV market is expected to witness a growth rate very high in the coming future. As the EVs enter the market, comes the basic necessity of charging stations to power those vehicles. Although there are charging stations available around us but the count is very low when compared with the actual requirement. This is due to the great deal of challenges that are associated with a traditional charging station such as Theft, Low Speed of Charging, Inability of Power Consumption monitoring, Monitoring and Maintenance, Under-Optimization of Charging Time etc. However, an IoT based charging infrastructure can streamline the performance of charging the EVs and come to rescue these challenges. With IoT, charging could be much easier, faster and effective and could take us a step ahead towards mass adoption of Electric Vehicles.

## **114. Competition in the Gaming Industry in the 5g Era: A Case Study of Nintendo**

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The paper consists of the role of 5G in uplifting the gaming industry with the Japanese market being the primary focus. The major emphasis remains on the gaming giant Nintendo to determine what set of audience it majorly caters to and what is the segment that it is missing and should try to tap on in the future. The case comprises SWOT Analysis and all the consoles released over the years by Nintendo. The growth of the gaming console market is analyzed and the major players at present are specified and studied thoroughly. Moreover, Nintendo's battle of supremacy against Microsoft Xbox and Sony PlayStation is covered in the paper. The pros and cons that come along with all the three consoles are highlighted to determine what the gaming console market offers currently.

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## **115. Internet of Things (IoT) Enabled Healthcare System for Tackling the Challenges of COVID-19 – A Bibliometric Study**

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During the COVID-19 pandemic the world have witnessed the rampant use of digital technology. People have resorted to digitization in almost every facet of their lives. This can be corroborated from the fact that digital technology has been utilized for working from home, online classes and even in monitoring the healthcare sector. Although digital techniques for instance mobile apps are beneficial, they can have drawbacks and constraints. The wearable devices, on the flip side, in combination with IoT, are predicted to have a direct impact on our health and day-to-day conduct, they could be of help for health surveillance during and after the pandemic. Drawbacks and limitations of digital apps, has made it evident to make use of disruptive technologies for COVID-19 analysis. Emerging technologies like artificial intelligence (AI), Internet of Things (IoT), the Internet of Medical Things (IoMT), big data, virtual reality (VR), Drone technology, and Robotics automation process, 5 G, and blockchain are examples of disruptive technologies that can help with digital transformation, research and development, and service delivery. The Internet of Medical Things (IoMT) is a collection of medical devices and software that can link to

health-care information technology systems through networking technologies. This paper reviews the adoption of contactless services in the post-COVID-19 period along with potential opportunities as well as challenging obstacles for healthcare agencies, policymakers, and customers. The world will look at how different technologies, such as robotics and artificial intelligence, are being used to track COVID-19 transmission rates and how advanced information technology like AI, Big Data, IoT can be used in healthcare. Finally, considering the effects of the COVID-19 pandemic the world will look into various IoT models that can be used in the diagnosis.

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## **116. Advanced-Data Analytics in Telecommunications Industry: A Case Study of Accenture & Competitors**

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The telecommunications (telecom) business is dealing with an avalanche of data daily as a result of smartphone adoption, the rise of social media and the Internet of Things, as well as the availability of next-generation communication networks. Regularly, telecom businesses deal with terabytes to petabytes of data. As recent advancements in data analytics have opened up new avenues for extracting useful insights from telecom big data, this research paper is aimed to study Accenture's capability in leveraging Big Data Analytics in the Telecommunication industry vs other IT competitors who are placed in Gartner Magic Quadrant on Data & Analytics service providers 2021. Because of the rapidly evolving Big Data Analytics technological landscape, it's critical to look at existing BDA applications in the telecom industry. Hence, this paper also discusses the telecom use cases leveraging data insights, evaluates the research, and gives a case study of the Gartner Magic Quadrant for Data and Analytics 2021 leaders. Based on four Characteristics, we conducted a SWOT analysis on Data & Analytics service providers in the magic quadrant, namely, the Global Delivery Approach, the Skilled workforce in Analytics, R&D, and the Threat of New Entrants. We also discussed their Data-driven approach to leverage the data to help CSPs reinvent themselves to identify new growth models.

## **117. Word of Mouth's (WOM) Impact on Students B-School Selection**

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This research paper attempts to analyze how word of mouth affects the student's B school decision making processes who wish to pursue higher education in business schools. Research data was collected by survey method with the help of questionnaire which was distributed to students and aspirants of different B schools across India. For data analysis statistical techniques like descriptive analysis & factor analysis was used. Only a few studies, particularly in the Indian context, have been conducted in this field. Research provides insights regarding how students research and shortlist particular B-Schools. Institutions can form their strategy regarding online presence of college.

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## **118. Big Data Analytics of Social Media Behaviour for Enhancing Customer Engagement**

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Social media services help people connect and communicate worldwide for sharing content, photos, videos and for following their friends. Globally, there is a huge amount of data generated every minute by users on social media platforms. Social Network Analysis (SNA) mainly uses big data analysis techniques and frameworks. Its goal is to extract meaningful insights from social media data in order to help individuals and organizations make the best decisions possible in a variety of areas, including business, marketing, politics, and health. With the daily growth of social media usage, social data analysis is drawing a lot of interest. The objective of such analysis is to find, understand and describe usage patterns to predict user behavior. Such analysis can help organizations and institutions understand the behavior of users to target products and services more effectively. For this goal, it's vital to gather information about clients from social media, browser history, desktop and mobile applications, and other sources. This paper explores how big data analytics connects social media and discusses recent advances and enhancements in analyzing social networks. Marketers, organizations, and managers who are interested in observing the trends and gaining insights from social media data, will benefit from this study for making customer engagement decisions.

## **119. The Impact of Social Media Channels on Start-Up**

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Every business needs a medium to grow, a path that accelerates its operations and is effective in many ways. One such effective medium for start-ups, new or small businesses is the Social Media Channels. Social Media today is one of the main mediums for an organisation in hiring resources, advertising their products, expanding their reach globally in the most convenient ways possible. This method reduces time and expenses and increases output compared to conventional marketing for particular businesses. This paper discusses how social media channels played a pivotal role in the growth of small businesses or new businesses to be specific. With primary research that involves survey findings and case study approaches of few new business companies, this paper tries to showcase how social media, could effectively create a major impact on the growth of these businesses. In this paper the impact of factors like use technology competency and remote operations by the businesses are discussed in detail and results are combined to infer how positively has Social Media Channel has impacted their growth. The paper also discusses the limitations of social media channels and future growth aspects.

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## **120. AI/ML Enabled Decision Making in Facilitating Robotic surgery**

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Technological advancements have the potential to help every surgeon to enhance the quality of worldwide surgical care. Robotic surgery is currently at its inception stage but is expected to bloom with parallel advancements in computer science and artificial intelligence. The objective of this paper would be to understand the present and future scope of robotic surgery utilizing AI/ML techniques. The study will revolve around how next-generation surgical robots will be inherent in optimizing a surgeon's skills productively, to achieve the pinnacle of precision during complicated surgical procedures. It will focus on how AI/ML helps in Robotic Spine Surgery, Minimally Invasive Surgery techniques, and ophthalmic surgeries. It will talk about the current limitations of robotic surgery and how with the latest technological advancements it will be possible to overcome the shortcomings.

## **121. Sentiment and Statistical Analysis of Customer Reviews for Strategic decision on Positioning and Marketing**

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Customer sentiment is a major insight for any of its markets. It has been analyzed for online shopping in our used case, giving far more precise marketing information using Natural Language Processing (NLP). The method was used to extract customers' opinions and sentiments about apparel and the way they were introduced online. Data was extracted from chats, blogs, and other open sources working for the women's apparel brands. A standardized large dataset of 2.3 million responses for data mining for frequency, trend, colors, apparel type, and preferences was used. Findings from this study stated that customers prefer shopping online out of convenience and technology aids, but in the case of online shopping women's apparel have their ebbs and flaws. The study gave insights to allow marketers to resolve online shopping customer issues by analyzing their sentiments and suggesting. These were precise outcomes for apparel management and decision-making. The implications were the insights where the NLP analysis was further exemplified using The Boston Consulting Group (BCG) Matrix employed to assist marketers about the weaker and stronger products online. This also aided to categorize the merchandise under cash cow, star, question mark, and dog together, improving their shopping experience and from the marketing team's point of view to make better marketing decisions about their products. This method gives a precise categorization for differentiation as well as the agility needed for online marketing. We use "Machine Learning models" like "Support Vector Machine and Naïve Bayes" to calculate the accuracy, precision, and recall. Precise results were obtained by exploring these models and algorithms in Python.

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## **122. COVID-19 Vaccination Decision-Making Approach and the Sentiments of Indian Citizens**

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A new virus was unearthed in the year 2019, and the entire world was struck by a pandemic. Several different companies and institutions collaborated to produce the vaccine. The definitive answer to the coronavirus pandemic has been outlined as the implementation of a COVID-19 vaccine capable of restricting the virus's spread.

The Indian government recently scheduled and launched a large-scale vaccination campaign to combat the covid 19 vaccine. [1] However, there has been some skepticism among citizens, which is due to various reasons. COVID-19 was declared as a pandemic which was a global health crisis. We are now in the year 2021, but normalcy has yet to return, and many parts of the country remain in lockdown. The only way to stop the virus's spread was to develop a COVID-19 vaccine, which was recognized as the definitive response to the COVID-19 pandemic. [2] Numerous organizations concentrated on the vaccine's development. The most effective way to prevent any pandemic is to vaccinate the common population, including the current Coronavirus crisis [3]. Several factors cause cynicism in the minds of the common human being when it comes to COVID-19 vaccines. We'll look at different perspectives and sentiments about the Covid 19 vaccine amongst Indian citizens. We used social media posts as a source of information for this. We used sentimental analysis in Study 1 to see how Indian citizens' attitudes and sentiments about the COVID-19 vaccine changed throughout the COVID-19 crisis. we have performed a literature review to comprehend the critical problems that have created concern in the general public regarding the COVID 19 vaccine. [4] "Vaccination and COVID-19" were the key search terms. We looked for studies that were published during the COVID 19 pandemic and that reported on the phenomenon of vaccination. The Literature review revealed that there is a similar ratio when we talk about the negative and positive emotions towards the covid-19 vaccine and as the number of cases saw a rise there was a rise in the negative sentiment about the vaccine. However, the conclusion cannot be brought down about the sentiments because a long-term analysis is required and future studies can show the exact results.

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## 123. Soil Quality Testing using Internet of Things (IoT) Sensors

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India's economy is based on agriculture. It is the primary occupation of a large part of India's population, and crop production is becoming increasingly important as our country's population grows. If we want a good crop quality, it depends on soil because soil nutrients help grow the crops in better quality. For the most effective crop growth, the level of nutrients in the soil must be calculated. The proposed IoT-enabled soil testing system is based on soil parameter measurement and observation. This system monitors the temperature, humidity, moisture, pH, and color sensors to identify NPK nutrients in the soil. The farmer can access soil fertility through a mobile application and an intelligent technique suited to the crop's needs in the respective fields for a

better yield. With the help of IoT sensors, checking the temperature, humidity, and nutrient levels in the soil can also determine the most suitable crops for the soil type. It will monitor the soil's moisture, temperature, and humidity on a real-time basis and provide crop recommendations based mainly on the pH value. These research papers help farmers a lot with Sensors' help, such as pH sensors, temperature sensors, and humidity sensors, to test the soil. The acquired sensor values and crop recommendation are sent to farmers through the mobile application. The review of this paper reduces the time required to test the soil. Sensors support soil and crop health maintenance, helping farmers maximize their cultivation, productivity, and profit. This research paper is used for effective plant growth. The sensors check the soil's essential parameters such as temperature, moisture, humidity, and ph-value, nutrients. The result obtained from the measured value is very reliable and accurate.

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## **124. Emerging Trends and Scope of IoT in Inventory Management for Retail Sector**

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**E**volution of businesses is happening with the advancements in technologies so is happening in the retail industry. One such technology is IoT which is building a smart environment for informed manufacturing by connecting products, processes, infrastructure and people. With the penetration of digital sensors, all the components of the manufacturing value chain system can significantly benefit from it that allows high visibility and better control of production processes and also enables the automation of tasks side by side. (Objective) This research reviews how IoT can revolutionize inventory management in retail sector and focuses on the present scenario, challenges in implementing IOT in inventory management, and future scope of IOT in this field. It includes analysis of the various technologies currently being implemented like RFID, IIOT to optimize the inventory. (Research Methodology) A narrative literature review approach has been adopted for the study using the academic documents published in peer reviewed scientific journals, white papers, articles and data mining of the existing records and databases. (Implications) This study aims to help the academicians, supply chain professionals and experts by keeping them in line with recent developments, challenges and future scope of IOT in the domain of inventory management. (Originality) It is to analyse how IOT has been integrated into the day-to-day operations of retail market and stores to improve and optimize the inventory and how it can be further be improved.

## **125. Use of Virtual Reality (VR) In the Healthcare Sector for Training & Treatment**

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New technological advancements like Augmented Reality (AR), virtual reality (VR), and Extended Reality (XR) are transforming conventional healthcare. Speedy developments in connectivity and “e-learning” have accelerated distribution of simulation techniques and structured courseware. With development of 5G and low latency technology, the application of AR/VR is becoming possible in medical science. Post pandemic, a new normal of hybrid healthcare services would emerge. These futuristic technologies will support healthcare industry operations with clinical documentation, administrative workflow and patient outreach. They are also offering advanced support such as image analysis, mobile treatment, and patient monitoring. This study looks at some of the real-life use cases of VR technologies different verticals in healthcare sector. They can be used for training and education purposes to instruct technical and non-technical skills. The simulator-based learning can be far more effective than conventional training. This study discusses many opportunities and challenges for healthcare institutions, regarding the implementation of contactless services and use of new and emerging technology trends. Based on the study of the technology and its feasibility, it discusses the scope and practical applications of wearable devices, which include head gear such as VR headsets, cameras, sensors, GPS, solid-state compasses etc.

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## **126. Cyber Security in Healthcare Sector**

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A systematic study that will identify various kinds of cyber-attacks on hospitals resulting into data piracy breaches and to come up with possible solutions for the following. A frameworks like HIPPA ACT for India to tackle such problems in future in accordance with Indian drafts presented i.e. PDP (Personal Data Protection Bill) and DISHA (Digital Information Security in Healthcare, Act). To be done on PDP. DISHA and HIPPA Act which helps to come up with a framework for our country considering LIS vast population and diversity. Quantitative analysis can be done by having an on-ground report of how data is stored in different forms and what are us safety levels

examples. The analysis of this research will help the Indian health care domain with the know-how of various kinds of measures to be taken to prevent data breaches in terms of implementing an act like HIPPA. Having a dedicated CERT team and other measures to protect IT from cyber theft.

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## **127. Decision Making with IoT- Paving an Integrated Approach**

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While IoT has many benefits, its real strength lies in marketers' capacity to look at their consumers from a far larger perspective, regardless of touchpoints or phases in the total customer life cycle. This is where the Internet of Things (IoT) will play a role, not just in consumer applications, but also in industrial applications where simple value can be produced. To effectively use IoT in marketing, marketers must think outside the box and offer relevant services in a way that is useful and relevant to actual customers. This is a chance for marketing that is both comprehensive and customer-centric, as well as integrated. This paper presents the possible course of action for the marketers to explore the potential opportunities underlying in the implementation and use of IoT for business decisions, involving product development and enhancements.

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## **128. Implementing a Smart healthcare Framework using Blockchain with the help of a Smart Healthcare System - A Systematic Literature Review**

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The Internet of Things (IoT) has infiltrated nearly every aspect of life. The healthcare industry has become one of the most popular applications for IoT and related technologies like Artificial Intelligence, etc. In this paper, we examine the existing literature and applications for blockchain technology in the healthcare system. This paper provides a comprehensive overview of blockchain's use in the healthcare industry. It also puts forth a blockchain based Smart Healthcare Security structure

to ensure the system's inherent security and integrity. It also investigates alternative blockchain-based security solutions while combining the benefits of block chain technology as a prospective security measure, identifying potential issues in the Healthcare business, and combining the benefits of blockchain technology as a promising security measure. As a result, I've found many uses for blockchain in the state of the art, like sharing electronic medical data, drug supply chain, remote patient monitoring, and so on. This research aspires to investigate smart healthcare and the use of blockchain in it, build a procedural theoretical structure For smart healthcare, unveil the blockchain's effect on smart healthcare, and, ultimately, create a Blockchain based smart healthcare development application system based on stakeholder theory. The paper puts forth a Decision-Making and Experimental Assessment Laboratory (DEMATEL) to handle the dynamic interconnection within different characteristics and elements, and to separate the hierarchy and establish a procedural theoretical framework, interpretive structure modelling (ISM) is used and it also makes use of fuzzy set theory to sort out irrelevant attributes.

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## **129. Proposed Solution Using Robotic Process Automation for Populating Health Card with Medical History: A Challenges for Stakeholders in Indian Scenario**

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As the world moves towards digitization and while people have started embracing the new technologies, we are looking at a new age digital revolution with Robotic Process Automation, Hyper-automation, Cognitive Automation, and Intelligence. The number of resources, technologies, and power that we have in our hands is unimaginable. But these changes are yet to pave their way into the government sector and especially the benefits that come with it. All the clerical jobs in the government and public sector are mostly labor-intensive and heavily rely on human intelligence. So, the need of the hour is to adopt technology as fast as we can. India being a country with 1.4 billion people, becomes exceedingly difficult to attain a set goal in a short period. The rationale of this conceptual paper would be to propose a structured way or a model on how to streamline and optimize the process of user registrations for national health ID cards. This is a conceptual paper to suggest a model/framework that uses RPA for the user registration process. User registration and creation of health ID cards can also be achieved using RPA and other intelligent software available in the market. The paper will touch upon the cost benefits, better and shorter implementation time.

The model will also showcase the application of intelligent process management, intelligent approvals, and verifications using various available RPA software. The study eventually aims in providing an end-to-end solution for user registration and health ID card generation with minimal human interference, overcoming the shortfall posed by the manual models. We will also look at a few of the other possibilities where the same framework can be applied to automate other processes. Thus, improving the quality and timeliness of care.

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### **130. Influence of Consumer Decisions by Recommender System in Fashion E-Commerce Website**

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The Study aims at providing deeper insights on influence of recommender systems and various personalized suggestions in Fashion e-commerce websites. It gives information regarding how recommender systems impact the purchasing decision of a consumer to formulate better systems with data. The data obtained from the consumers who have shopped various fashion products in e-commerce websites infers that the suggestions listed below when they browse a product based on brand, colour or patterns shows it is time-saving and is more likely to get products that they are looking for. The data collected and inferences made from customer on the driving factors for the purchase of products from the recommendations helps us to customize and create better recommender systems for improved personalized experience. A Quantitative Method of approach has been adopted for this study. A preliminary set of five-point Likert-style questions with several subscales was designed and distributed online to a sample of 165 participants. The results were then evaluated using exploratory factor analysis and multiple regression techniques to test the hypotheses. Factor Analysis of the survey underlined several parameters of an individual's perception towards their personal information like- accountability and trust issues, geopolitical and data sharing concerns, and cyber security cognizance. It also provided an empirical understanding of the consumer-perceived model for an e-commerce transaction. Based on the findings, better industry standard e-security frameworks and models can be implemented towards the consumers' decision-making process. Knowledge from all these aspects can be applied to serve the research and practitioner groups.

## 131. Leveraging Blockchain Technology for Goods and Services Tax in India - Utilities and Challenges

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In 2017, government introduced Goods and Service Tax to put an end to a number of indirect taxes, which made the taxation system a little simpler for individuals as well as businesses. However, there is still a gap between what the government envisioned and its implications. This research paper aims to understand how Blockchain Technology can be leveraged to transform the GST in India. Also, to find out the issues that authorities are facing and their possible solutions. Following primary research, interviewed few industry experts as this concept is yet to be realized on ground and there are very few people, who have knowledge of GST and Blockchain. Also, analyzed past research paper and white papers. The study will help the policy makers, academicians and bureaucrats to understand about the impact and challenges of using Blockchain Technology in GST system, which will enable them to better design and develop a system incorporating technology to address the current bottlenecks and escape points in the system. Using Blockchain based distributed ledger and smart contracts will transform GST. It will reduce the administrative burden, cost involved, escape points and increase transparency. It will also allow customized smart contracts to perform complex tax calculations in no time and would also suggest what adjustments need to be made or even do it automatically itself.

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## 132. Healthcare data management – a Bibliometric Analysis

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Big Data has become the crux of the healthcare sector. Hospital reports, genomic data, EHRs, mobile applications, insurance, and IoT devices are big data resources in the healthcare industry. To provide appropriate solutions for improving public health, healthcare institutions must be equipped with all of the tools needed to generate, store and analyse data. Many papers have been published which talked about the use of technology to manage healthcare data and how these technologies evolved from cloud technology to blockchain technology. However, only a few papers have been published about the possible integration of AI & ML for healthcare data management. The purpose of the study is to conduct a bibliometric analysis on the relevant papers

published on Healthcare Data Management from the period 2010-2021. The analysis focused on finding out the previous research gaps, the latest technologies that back the modern healthcare data management, and areas that still need more research.

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### **133. Intelligent Process Automation for Third Party Risk Management in Post-Covid-19 World**

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**C**COVID-19 has shown that risk is not one-dimensional. The influence of Covid19 on Risks arising due to breaches by Third-party and nth party ecosystem on organizations has been quick with wide range of consequences like reputational and financial losses. Although automation has been around and being implemented for quite some time now, there is a pressing need to incorporate intelligent decision-making systems in the outdated automated processes and practices that used rule-based manual risk assessments. The improvements in the field of Artificial Intelligence, Robotic Process Automation and related technologies have given rise to intelligent process automation, which can take advantage of these underlying technologies to effectively provision end to end actions on the risks arising due to third-parties. In academic research domain this area has remained under-focussed. Hence this study tries to address this gap by introducing how intelligent process automation can aid third party risk management processes and proposes a conceptual model for understanding system can be put to use. Key challenges and opportunities are also provided in this qualitative research paper based on narrative literature approach. The study provides implications to developers for designing and developing Intelligent process automation tools for assessing risks associated with third parties, it helps academicians to explore latest developments and technologies in the automation domain and to the employees of the existing organizations as it will help gain perspective of the underlying technologies involved in IPA and TPRM.

## **134. Facilitating decision making through IoT and Big Data in Product Development**

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When it comes to product development, a new wave has set forth that targets the very specific needs of a very specific customer base, which in turn leads to the development of hyper specialized products. Hyper-specialization, when coined simply, is the breaking down of a larger process into smaller pieces [1]. This involves complexities and criticality as it caters to the intricate details of regular life. What happens when we objectify this term and give it a 3D reality? The evolution of the Internet of things has made it possible for the devices embedded in everyday objects, to send and receive data themselves. However, with the current trend of the personalization of the market, where companies target niche industries, the products need to cater to the very specific needs of a very specific customer. As the market has shifted more to the process of individualization of customers, this research paper aims to shed some light on the usage of the Internet of Things and Data Analytics to build a design model for such products. The idea is to mix the technologies of the Internet of Things and data analytics with product management while studying the market for its recent trends and developments. Since this technological bend focuses more on value creation and building new insights into the usage pattern, this concept is more focused on shifting from an asset centric transactional model to a relationship-oriented service model.

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## **135. Sustainability by Recycling Of Electronic Waste Using Digital Technology**

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Through an extensive review of the literature, this article explores the recycling of electronic waste using digital technology. Digital technologies like robotics, the Internet of Things, cloud computing, artificial intelligence, and data analysis will help us manage e-waste in the manufacturing industry. The data is collected through online compilation and qualitative surveys that study digital technologies related to waste management. The research will help the industry research the opportunities

and needs of waste management recycling and digital technology. The recycling and sorting of waste management departments is an essential part of the circular economy, a significant concern. It will also help waste management departments to benefit from these technologies. This article will contribute to an industry where all types of waste can be recycled and reused through advanced technologies such as collection and sorting for communication and other operational and logistical tasks. It will provide space for automated waste management departments, most of which can be quickly recycled. You will also meet your essential health, safety, and environmental obligations.

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## **136. Digital Payment Systems: User Experience on Related Technology with Special Reference to Covid 19**

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In the current state of affairs wherever pandemic like covid19 has modified the dynamics of nonpublic interaction of humans, the requirement for digital payments has prevailed, and currently, it's a much adopted payment technique by the utmost population. Payment gateways like (Google pay, Amazon pay, apple pay, etc) and e-wallets square measure a lot of use, the convenience to pay, security, fast transactions, and the easy interface it offers have become its strength. Earlier wherever paper currency was the sole supply of group action that was a less secured technique, however with the ever-evolving world, 'digital' includes a powerful impact on each side of the economy. Its price noting that the stress placed on digital payments and therefore the digitization of commerce has implications for people, businesspersons, governments, and anyone and everybody who could be a participant within the economy. Nonetheless, despite advancements over years on the payment system, there's restricted analysis on the impact of digital payment throughout the pandemic covid-19. This study aims at how the covid 19 outbreak has impacted the digital payment system, growth in the number of users and what their preferences are and how reliable it is to adopt the technological method of payment.

## **137. Combating Covid-19 Information Asymmetry through Artificial Intelligence - A Systematic Literature Review**

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The healthcare industry has evolved to be one of the largest industries in almost every country due to the infamous trigger of Covid-19 mechanism. COVID-19 health services and education are highly significant because they are fundamental public resources that define the form of society in which we live both before and after the pandemic. The COVID-19 pandemic has exacerbated the already existing informality in the healthcare sector. Because of the information asymmetry [2], doctors are often required to identify, analyze, and treat their patients using heuristics. The use of protocols and solutions that surface insights into care unit workflows ahead of time eliminates the need for surface-level data and disarms latent biases, resulting in better patient outcomes. The AI based applications are used to monitor records that have been reported, recovered, or expired. Through AI we can track the mutation of any deadly virus or infection in a comparatively faster duration of time and help prevent potential individuals from catching the infection.

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## **138. The Application of IoT Technology for a Proposed Traffic Management Solution: Its Technological Challenges and Opportunities**

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Road networks are analyzed in terms of their accessibility, connection, and traffic density, as well as their degree of service and compactness. The transportation system facilitates movement and provides a means of reaching destinations. An insufficient transportation system stifles economic activity and obstructs progress. Increased economic activity and opportunities in cities result in a rapid increase in the urban population and as a result, demand for transportation facilities in most emerging countries. The administration in these sectors is not able to deal with the pressures due to rising inhabitants and economic activities in cities, resulting in uncontrolled urban sprawl, traffic congestion, and environmental degradation. The Internet of Things (IoT) is mainly composed of all web-enabled devices that use embedded sensors,

processors, and communication hardware to capture, transmit, and act on data from their surroundings. These devices, also known as “connected” or “smart” devices, can communicate with other related devices within their proximity through a process known as machine-to-machine (M2M) communication and act on the collected data they receive. IoT systems that receive inputs in the form of sensed data, user input, or other external triggers are controlled by event-driven applications. Furthermore, for the smooth passage of cars, a system of assessing traffic density is being considered, and collecting, storing, monitoring, and supervising of traffic data is carried out by employing the RFID, infrared sensors, microcontrollers, and a variety of transmitters and receivers.

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## 139. 5G Massive MIMO Transforming the Mobile Experiences

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While mixed with Massive Multiple-Input Multiple-Output (MIMO) systems, beam forming technologies are anticipated to play a vital key position within side the subsequent era 5G communique systems (scheduled to be deployed in 2020). This paper’s primary intention and goal are to speak about how those big MIMOs mixed with the 5G generation will extrude and beautify cellular users experiences. A 12-port antenna array running with in side the LTE band 42 (3400-3600 MHz), LTE band 43 (3600-3800 MHz), and LTE band, 46 (5150-5925 MHz) for 5G big multiple-enter multiple-output (MIMO) programs in cellular handsets, is offered which in flip changed into simulated, and a prototype changed into fabricated and tested. These measured effects confirmed desirable MIMO performances with a low envelope correlation coefficient and excessive ergodic channel capacities similar to the multiplied isolation, excessive efficiency, and enough gain-stage traits received for the proposed MIMO cell phone antenna. Furthermore, the residences of the data-model/talk-mode layout after research also are offered here

## 140. Impact of Social Media Influencers on Brand Promotion

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Everything is going digital nowadays. To increase the sales, company's growth and brand value many companies often approach social media influencers to promote their brand. This paper research about the impact social media influencers makes when they promote a brand. The influence of social media has increased multi-fold all over the world in recent years. According to a report published in Statista (1), In the year 2020, almost 3.6 billion people used social media around the world; by 2025, that figure is expected to climb to nearly 4.41 billion. Especially in India, after the reliance-jio company made an entry with cheaper data rate the User base has grown in large number of volumes. In the same report, it was mentioned that social media Users in 2015 were 142.23 million which increased to 376.1 million in the year 2020. Clearly, the Recent 5 years has added 233.87 million new users. And these number according to that survey about to grow nearly 448million users in the year 2023. As per "India Brand Equity Foundation" the Indian E-commerce sector has been on an upside growth slope and is contemplated to overtake the United States of America (USA) to become the 2nd bigger Ecommerce market internationally by the year 2034. Indian e-commerce industry is expected to reach 99 US billion Dollar by the year 2024 from 30 US billion Dollar in the year 2019, increasing at a 27% Compounded Annual Growth Rate (CAGR), with daily household item and clothing would likely to be the main drivers of magnanimous expansion. As per the Payoneer report, The Indian e-commerce sector ranked 9th all across the globe. Social media platforms have witnessed an exponential growth, where the websites by Instagram, Twitter, LinkedIn, YouTube and Facebook have taken the world into a brand-new era. Hence, this research paper focuses on the impression social media influencers make on consumers' mind and purchase intentions.

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## 141. Impact of Blockchain on Marketing and Advertising

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Block chains are quite popular these days. But what problems do they solve? As the name suggests block chains are a group of interconnected blocks that contain information. It is a distributed ledger which is open to everyone. It is a chain of data

blocks that are sorted sequentially and kept in a decentralized manner across all of the blockchain's participating nodes (1). Once data is entered inside a blockchain, it becomes very difficult to change it. Every block has three important parameters namely hash data, block hash code and also the block hash code of the preceding block. Therefore, blockchain can be regarded as highly secured and safe. This secure technology can disrupt how business happens and how data is stored across several industries especially the finance sector. However, the impact of Blockchain goes way beyond Banking and finance industry. In the field of marketing, marketers constantly need access to a lot of consumer data to better position their products and to create efficient products which match the requirements of the consumers. With data privacy becoming a global issue, several consumers are becoming vigilant while providing their information on the internet. Also, it is becoming increasingly difficult for the advertisers to detect fraud in advertising which is mainly related to inconsistent PPC (Pay Per Click), CPC (Cost Per Click), Impressions and clicks. Ad vendors using illicit methods to gain access to users' personal data for their own gain, in exchange for rewards, and similar scenarios are a serious threat, therefore blockchain was introduced into the digital advertising world to offer users ownership over their data (6 Benefits from Blockchain Marketing Technology, n.d.-a). Several questions have been raised on the methods used by advertising platforms to detect invalid clicks. This research paper adopts a narrative literature review approach where in the use cases of Blockchain in marketing and advertising sector will be analyzed and put forward. This paper will be beneficial to academicians, marketer, advertisers, and all activities related to Marketing and advertising.

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## **142. Buying intention of consumers towards Autonomous and Connected Electric vehicles (ACEVs) in India**

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The objective of this paper is to obtain a better understanding about the buying intention of consumers towards Autonomous and Connected Electric vehicles (ACEVs) using the data collected through primary and secondary research with reference to Indian Automobile Industry. Also, look into the effects of gamification on the ties between consumers' self-image congruence and their attitudes toward autonomous vehicle buyers, as well as their views of EV owners as "unconventional. Here we are going to analyse the behaviour and perception of the consumers towards the next generation vehicular revolution and know how they are going to adapt to this transformation. The methodology used in this paper is Descriptive Statistics and Exploratory Factory Analysis which are used to predict consumer attitude towards

automated vehicles. We'll also discuss Purchase Intention, which is one of the most frequently recognised theories of consumer behaviour. It aims to explain why people behave objectively rationally and how they optimise expected value for personal advantage in order to obtain satisfaction. The Findings from this paper can be the implication of the percentage of respondents who are willing to opt for autonomous vehicles, if so, what are the determinants that relate to the adoption of this revolution which can benefit the market researches to strategize accordingly.

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### **143. Managerial Decisions and Implications on Video Streaming OTT Platforms: A Comparative Study for Indian Markets**

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Streaming platforms revolutionized the media and entertainment industry, which led to the cord-cutting phenomenon; thus, users started adopting streaming platforms compared to Televisions. The main driving force for an Over-the-top video service is the strategies implemented by a particular service which eventually leads to an increase in consumer base. This paper attempts to study strategies used by popular digital streaming platforms to capture viewership in India. Comparative analysis on these streaming platforms and how Covid-19 fueled the growth of subscriptions in India has been explained. Furthermore, we give an overview of the guidelines prescribed by the Indian government for regulating the streaming platforms, which help them align their strategies to comply with the OTT regulatory framework.

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### **144. Role of Artificial Intelligence (AI) in Risk Management**

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With the latest technologies like IoT, 5G transforming the digital ecosystem, massive amounts of data are expected to be processed by various companies and public sector organizations increasing the importance of a preventative risk stance. Traditional methods of analysis, on the other hand, have proven increasingly incapable of dealing with such massive amounts of data. Instead, artificial intelligence (AI) may

be used to assess both known and unknown hazards. In various industries, AI is being used to identify sequence and patterns that humans cannot and as a result, creating opportunities to enhance the risk management processes. Benefits of AI in risk management extend to several areas and as a result, risk managers respond faster to emerging exposures. Leaders who leverage cognitive technologies to anticipate and proactively manage and mitigate risk can gain competitive advantage and boost the organizations' performance. This paper studies the adoption of AI for risk management in various industries, discusses the impact/benefits of cognitive technologies and identifies challenges and future scope of AI in this context. For this study, a case study technique was used, in which numerous use cases from diverse sectors were studied in terms of AI technology adoption for risk management and mitigation. This study will be useful for practitioners, managers, academicians and organizations to design and customize AI solutions to efficiently identify and mitigate/reduce the impact of risks.

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## **145. Chatbots Marketing for Personalized Shopping: A Conceptual Study**

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The COVID-19 pandemic is changing the way we connect, communicate, and collaborate. The chatbot, a software application designed for human-like conversations, is one powerful tool that is helping to close the social distance gap between customers and businesses.

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## **146. The Application and Impact of Artificial Intelligence on Consumer Behavior in the E-Commerce Industry**

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Artificial intelligence is playing an important role and creating a huge impact in every industry, business and many organizations. It is one of the main drivers of many emerging technologies which is making a huge impact in every aspect, wherever it is being implemented. Artificial Intelligence has now become one of the key components

in the Ecommerce industry. Many E-Commerce businesses started implementing different artificial intelligence tools for understanding the buying behaviors of customers, visual searches, chat bots, analyzing to make strategies, retargeting etc. Artificial intelligence has optimized the potential of the E-Commerce industry and had opened many new paths in improving the customer experience, analyzing the patterns of consumer behaviors. This industry is evolving with the application of artificial intelligence unleashing its capacity to leverage the business. It totally changed the way retailers sell their products and services and also the customers who consume their products and services. Artificial Intelligence is also helping the business to increase its brand reputation by providing many a better delivery of services. In this paper, we will discuss how the application of artificial intelligence in E-Commerce have changed the patterns in the buying behavior of customers, the different sectors using AI, the Intelligent systems and mechanisms, the benefits and threats in using AI in E-Commerce, different AI tools used to analyze the behavior and patterns of consumers.

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## **147. Intelligent Decision Making with Social Media Algorithms – A Review**

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**S**ocial media is filled with content now a days, every second a huge amount of data is posted on social media. In order to segregate the content based on the interest and relevance to users' feed, different social media platform follow different algorithms so that every user gets access to the content that they want to see or they relate with. Social media algorithm is a filter which decides as to what content reaches your timeline irrespective of the publish time. These days social media algorithm will be such that the user will get feed from family and friends instead of public and marketing related content. Furthermore, the share ability, the possibility of a content being liked, commented or shared via social media and whether the topic is trending is another factor of assessment for a post to reach the users' timeline.

## **148. The Rise of Blockchain Technology in Current Agricultural Systems & Future Potential**

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**A** blockchain is a decentralized database of records in the form of encoded blocks or a public ledger of all completed and shared operations or digital events in the form of encoded blocks that can be verified at any moment in the future. As part of the evolving agricultural system, blockchain technology is being used. It preserves confidentiality and integrity of data by integrating Precision farming and smart agriculture approaches in order to increase agricultural production. Blockchain technology is gaining traction in a variety of agricultural applications. These applications may be able to meet a variety of needs in the agricultural product ecosystem, e.g., Integrity in food safety and IoT-based nutritional and sensory management, as well as origin traceability and transactions efficiency. The approaches and uses of blockchain technology in the farming sector are examined in this article. There are several types of agricultural blockchain applications and evaluated as technical aspects to illustrate the usage of blockchain methods. Research paper aims at helping government, agriculturists and managers to adopt blockchain applications. The goal of the research paper is to promote blockchain technologies, particularly their various food applications in the agricultural product ecosystem.

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## **149. Cybersecurity in Drones & UAVs – A Bibliometric Analysis**

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**T**he global military UAV and drones market size in 2018 stood at over USD 8 billion and is projected to rise with a CAGR of 12.4% and is expected to reach USD 21.76 billion by 2026. Drone-enabling technologies and their future applications in the transportation field are already diverse and rapidly developing. UAVs or Unmanned Aerial Vehicles are used for general applications like site surveillance and inspection, transportation of goods, filmmaking, and search-rescue operations. UAVs and drones also include critical military applications such as surveillance, aerial attacking, and military training. Hence to maintain confidentiality, integrity, and availability of the data collected, UAVs and drones have to be kept highly confidential and protected from any kind of tampering. The events such as the loss of the Lockheed Martin RQ-170 Sentinel,

an American UAV to Iran in 2011, and the key logger virus infecting the US UAV fleet at Nevada-Creech Air Force base are evident incidents that exhibit the race between cyber-attacks and Cybersecurity is perpetual and requires continuous development. The government regulations on UAVs and drones also need to be updated regularly regarding the constant growth in the technologies of drones. The proliferation of drones presents an opportunity for regulators to stimulate a new industry. Regulators may help, impede, or act neutrally in creating innovations when faced with disruptive technological change. The main challenge is to determine if current regulatory structures are adequate for mitigating potential negative consequences while enabling drone services to grow. Drone legislation would have to answer the usual public concerns about performance, competitiveness, and long-term viability. In this paper, the specifications (electronic and physical), networking architecture, types of cyber threats, governance regulations, cryptographic algorithms, and standards of UAVs and drones are discussed and analyzed.

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## **150. Cascading Impacts of Electric Vehicles (EVs) and Automated Vehicles (AVs) on Different sectors**

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**E**lectrification has become the most important technological breakthrough in the automation industry. From transportation to building services, engineering and all fields of business, electrification would have an effect on all aspects of life. Electric mobility is a rapidly growing market in many parts of the world. Regardless of the fact that, within a short period of time, the outlook for projected demand, revenue, consumer penetration, and business trends is very optimistic. Electric vehicles (EVs) are obviously on their way to being a requirement, having progressed from a novelty to a rarity to a fact. Of course, the big question is if these significant developments signal the long-awaited—but yet unrealized—start of the end for internal combustion as we know it. Autonomous vehicles (AVs) are one of the most innovative consumer product technologies and the wait for them is eventually getting shorter. If this technology becomes more readily available, the ultimate results, whether positive or negative, are likely to be crucial. Ensuring that these emerging innovations are universally adopted will prove to be a significant foreign policy concern. In certain respects, the future of electro mobility is strongly integrated, but at the same time reduced in terms of complexity, risks and their wide acceptance. (McKinsey & Company, 2020) The objective of the paper is to describe the current status of the development of electric mobility and automated vehicle industry. The paper also attempts to explain potential

future changes in the market and to examine some of the key factors and influences that are likely to affect mobility in the future. A detailed qualitative analysis based on the secondary data will be done to examine the positive and negative implications of these new trend mobility on various other sectors and lay out the key implications across the mobility ecosystem. This paper will try to help majorly the governments, policymakers and regulators to review the impacts and draft policies accordingly.

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## **151. Cyber Risk in Healthcare System: A Bibliometric Analysis**

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To Healthcare data and medical devices are becoming increasingly vulnerable to cyber-attacks. Given the criticality of healthcare systems, the consequences of a breach or cyber-attack can lead to a huge potential risk. This risk is not only limited to monetary loss but can pose a serious threat to the physical wellbeing of the patient. Even the medical history and medical information about a patient can be accessed by criminals who can encourage them to indulge in unethical and criminal activities. Also considering how often the medical information about the patients is leaked and misused, robust security measures and cyber-security in this sector are especially important. For cyber-security, technology design is critical. Using a systematic and holistic approach, this paper would try to throw some light on the issues faced by the healthcare sector and gather real knowledge about the threats this sector is prone to. The research highlights the casual approach of the scientific community as well as the general public on this matter, other than the US. The research tries to generate awareness about the importance of cybersecurity in the healthcare department and also tries to evaluate the cyber risk & provide a potential solution for the same. Statistical analysis like bibliometric will be utilized to evaluate the importance of scientific production in securing the healthcare sector for possible cyber threats. Bibliometric analysis is an effective tool that helps in reflecting the temporal evolution of research on any specific topic. It is utilized to get access to the various scientific outputs of scientists, institutes, countries, etc. Bibliometric analysis is quite popular with computer science, information science, and various other fields. This study tries to present a comprehensive overview of cybersecurity in the healthcare field from the perspective of bibliometric. This research tries to make people aware of the importance of cybersecurity in the healthcare field. And also make them familiar with the potential threat that breaches in the healthcare systems can cause. This paper would talk about the existing problems that people have to face because of the breach in the cybersecurity in healthcare department and also draw a comparative analysis

between developed and developing countries. This paper would also talk extensively about Indian readiness with respect to healthcare security. The possible solutions and recommendations are also discussed in this paper. It would not only discuss the threats that security breaches in healthcare could impose but it would also make the readers aware of the importance of cybersecurity in that field. It would also motivate researchers to explore more about this field.

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## 152. Evolution of Supply Chain 4.0

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**T** Supply chain 4.0 refers to the integrated use of Artificial Intelligence, Machine Learning, IoT devices, cloud computing and other such technologies in the supply chain management functions of various organizations. With the continuous advancement in technologies and its usage, the way systems operate and business process's function has been totally revolutionized. Digital transformation has seeped into each and every industry. This evolution coincides with the industrial revolution, that started with usage of steam and fossil fuels such as coal to power up locomotives, it then moved on to usage of electricity as an improved power source, next came the usage of computers and energy and in the most recent times, defining the IR4.0 is usage of IoT devices, big data, AI/ML based algorithms, cloud computing etc. Supply chain 4.0 has an oblivion of applications and unimaginable potential. It focuses on micromanagement of each process coupled with robotic process automation, that not only aims to reduce costs and boost efficiency but also increase strategic competitiveness.(Adam Mussomeli, Doug Gish, 2021) This paper intends to find out the key components the supply chain 4.0 model used across industries, their different applications and the shortcomings. It will also explore how the existing systems have been changed and disrupted by the new technology. The research title presents a vague idea of the entire concept and this paper aims to simplify and clear out the same for a better understanding of the readers. By way of qualitative analysis using secondary data various dimensions will be explored so as to look at the title from different perspectives.

## 153. Analysis of Challenges in Data cleaning

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The purpose of this research is to analyze challenges faced by database administrators and analyst in industries and how do they manage it. The most common problems in data cleaning are to understand the type of the error, how to detect the error (Automation), where to detect it for example – error in the source database sometimes reach the data pipelines. While most of the error detection happens in the original database some errors are detected in the data pipelines. Despite the importance of data collection and analysis, data quality remains a problem in almost every large organization. For understanding new technology in the field of data cleaning, statistical method such as machine learning is been introduced and explained.

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## 154. Blockchain and IoT in developing Fintech Ecosystem- An assistance to Insurance Industry

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The Covid Pandemic has coerced the insurers to determine how best to meet the demands of their customers, provide service with minimal effort, and achieve their cost efficiency objective. The cost-efficiency objective of the insurance industry should also be aimed at freeing up funds to invest in new technologies and not lose sight of the transformation imperative. The insurance business, despite its size, is underrepresented in the literature. As a result, this paper explains how blockchain technology and IoT might benefit the insurance business. We go over the fundamentals of blockchain and IoT, the most prominent platforms already in use, and a short theoretical description of the insurance sub-processes that both the technologies can positively alter. We also go over the roadblocks that must be overcome in order to properly utilize blockchain technology in the insurance industry. This study provides a qualitative assessment and analysis of journals, articles, and white papers on the implementation of Blockchain and IoT in the Insurance industry, as well as research trends. In addition, the study attempts to identify potential opportunities in the insurance business. The systematic review aims to bring together findings from several fields of study. The goal of this review article is to analyze both the literature sources to comprehend the actual levels

of implementation and use cases, as well as to determine the direction in which the insurance industry is now heading in terms of technological adoption. It also covers a wide range of study topics, as well as the most significant articles from the best journals. This paper also covers book chapters, conference papers, journal articles, review papers, white papers, and reports from various organizations. The research can prove to be a useful beginning point for new researchers looking for interesting and relevant research on the application and implementation of blockchain and IoT in general insurance.

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## **155. Analyzing Cyber Security and Data Privacy Models for Decision Making among Indian Consumers in an E-Commerce Environment**

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**W**hile e-commerce evidently addresses consumer needs, businesses and their customers remain vulnerable to cyber-attacks that could already be instituted against them. This paper presents an understanding of the antecedent factors that engender concerns among Indian consumers while using e-commerce websites. It aims to measure the perceived threats and data privacy issues that influence an individual's approach to making a risk-informed buying decision. A Quantitative Method of approach has been adopted for this study. A preliminary set of five-point Likert-style questions with several subscales was designed and distributed online to a sample of 165 participants. The results were then evaluated using exploratory factor analysis technique to test the hypothesis. Factor Analysis of the survey underlined several parameters of an individual's perception towards their personal information like- accountability and trust issues, geopolitical and data sharing concerns, and cyber security cognizance. It also provided an empirical understanding of the consumer-perceived model for an e-commerce transaction. Based on the findings, better industry standard e-security frameworks and models can be implemented towards the consumers' decision-making process. Knowledge from all these aspects can be applied to serve the research and practitioner groups. This study approaches a substantial research gap by providing real-time data for the variables affecting Indian customers' attitudes towards security and data privacy concerns as online shopping transactions increase. The results add to a growing body of literature identifying and developing advanced ways to reevaluate the existing compliance strategies across e-commerce websites, making it conducive for the customers.

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## **156. Evolving Journey of Chatbots: Insights into Business Decisions and Management Applications**

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**R**apid digitisation and the emergence of the internet and mobile devices have altered how individuals communicate with businesses. Chatbots are specially designed and developed computer programs that interact with humans by simulating a conversation. Chatbots engage with their human partners using a variety of frameworks, ranging from a simple text interface to speech recognition capabilities. Conversational Agents are an evolved version of chatbots, where Natural Language Processing (N.L.P.) makes the interaction between the bot and humans much more realistic and simpler. This paper answers several frequently asked questions in the domain of chatbots, bringing out the differences in mundane versus the complex tasks and business intelligence performance of chatbots using a discussion into the historical backdrop and the background for chatbots and conversational agents, two types of dialogue systems. A timeline has also been created to comprehend their advancement better. Next, a deep dive into how small and medium-sized businesses can reap the benefits of A.I. Chatbots by looking at various ways that chatbots can add value to businesses is carried out, along with linguistic differentiation and how it affects service and customer satisfaction. Finally, an analysis into how companies in various industries use Chatbots for conversational marketing is done. The methodology followed starts with looking into the evolution of chatbots, looking into the changes in decisions that each step takes. Next, two types of chatbots have been defined based on technology and use, and discover the complexity of these technologies. A deep dive into how businesses can reap the benefits of AI is done, followed by which the various ways that chatbots add value to businesses is looked into, followed by reviewing the areas of applications in different industries. Finally, an analysis into how companies use chatbots for conversational marketing is done.

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## **157. Purchase Intention and Consumer Behaviour Decision for Organic Products**

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**T**his paper aims to acquire information about nature of customers & customer

willingness to buy organic products. The purpose of this study report is to identify the reasons behind the attitude of the customer on these products. A face-to-face interview was conducted to gather data, which included a closed-ended questions with a structured questionnaire. Summation of 150 people participated in the poll. Conclusion of the study were analyzed using factor analysis in SPSS. Consumers regard organically cultivated goods as high quality and highly healthy, according to the findings. Such items are seen as problematic appearance and costly. Customers aren't very familiar with the market's supply of organically farmed products. Some customers prefer organic products and they are ready to pay a high price for these products. As a result, natural product marketing tactics should target these individuals. According to the findings of the study, one of the most significant tasks for producers is to raise customer awareness of organic product and how to distinguish it in the market. They might stress organic items' health advantages, natural components, and high quality. The findings of this study might be utilized to plan future marketing operations, since they give important understanding behaviour about these products. And learning the elements which influence them for purchasing these products.

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## **158. Impact of Work from Home on Employee's Performance in IT Industry**

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It's been a year since lockdown announced by Indian government, the COVID-19 had a worst economic consequences and threat to the lives across the world. World Health Organisation declared COVID-19 as a pandemic after global spread of the virus. After the covid-19 everything has changed the safety of the person and the safety of the society's lives are at stakes. Due to corona virus nearly 2.70 million people have lost their lives all over the world. So, every company had to adapt to continue their processes from the remote location. Technology is playing a significant role to connect the employer and employee. With the help of the digital transformation employees stayed connected with their respective clients using their smartphones and compact laptops the office environment and work environment is different. To make home environment effective the organisation should provide all the resources which are must in order to deliver the expected performance from the employees. It did help the company to stabilize the profits after the huge loss from strict lockdown. This study is to analyze how work from is profitable and how it can be a good option for companies and also for the employees to deliver service considering the employees performance. To study the Impact of Work from home on employee's performance in

IT industry, primary data as well as secondary data will be used. This study will help IT organizations to restructure the workforce in future.

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## **159. Understanding usage of IoT Applications and its impact on consumer decision making in Indian Automobile industry**

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This research study aims to have a looming level towards modernist users who prefer in the vehicle buying sector, technology-driven features tightly connect development processes with software-driven feature rollouts and updates. New generation people account for a sizable portion of the market for technology-driven automobiles; however, the older generation is exhibiting an equal degree of interest in similar purchasing and sale preferences. Hence, all leading Indian and global automakers started adopting and inculcating many Internet of Things (IoT) features in the latest models of their automobile fleet. The way forward for the sector is clear and full of possibilities. It's time to kick it up a notch. These trends attract more automobile users as they consider such modern features to add safety and durability as human security has been considered the prime factor in today's world. This study elucidates the benefits of adopting IoT in Indian automobiles by the significant involvement of Gen Z.

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# Telecom Business Review



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