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AI IN COMMERCE AND MANAGEMENT



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A Study on Evaluation of Artificial Intelligence in Education for Next Generation Among Students

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ABSTRACT

The use of Artificial Intelligence (AI) is now observed in almost all areas of our lives. Artificial intelligence is a thriving technology to transform all aspects of our social interaction. In education, AI will now develop new teaching and learning solutions that will be tested in different situations. Educational goals can be better achieved and managed by new educational technologies. First, this paper analyses how AI can be used to improve outcomes in teaching, providing examples of how technology AI can help educators use data to enhance fairness and rank of education in developing countries. This study aims to examine teacher's and student's perceptions of the use and effectiveness of AI in education. Its use is perceived as a good education system and human knowledge. The optimistic use of AI in class is strongly recommended by teachers and students. But every teacher is more adapted to new technological changes than students. Further research on generational and geographical diversity on perceptions of teachers and students can contribute to the more effective implementation of AI in Education (AIED).

INTRODUCTION

Artificial intelligence is one of the many technologies used successfully in many industries today. It is attracting more and more attention every day with the successful projects in recent years. AI concept *has recently begun to be* accepted as the technology of the future at the global and national levels, and is nowadays considered as the driving force of computer engineering and technology. The goal of AI is to imitate human intelligence through computers, in that sense, by allowing computers to learn. It *is* also one of the key technologies that are ready to transform education. Traditional education seems to be fixed in terms of time, place, and prescribed *and learning* process is continuous, especially at younger *students*.

Traditional educational systems are known to be inflexible, but they are now changing to adapt to the technological advances of today's world. The use of AI in education has attracted attention in the following ways

Automation - the simplest use of AI often brings the most immediate benefit: by automating simple tasks, such as grading, classifying digital resources, or schedule, teachers can increase their time interacting with students.

Adaptation - today's technology is an integral part of the educational and business environment. AI in schools will help students initiate technological change.

Integration - AI solution can be integrated with other IT initiatives, such as intelligent technology and managed IoT networks, to provide appropriate solutions for teaching student.

Constraint - student needs and curriculum priorities are constantly changing, ensuring that the content provided by teachers is relevant and practical. *AI*-led analytics in education helps to identify key trends, extract key markers, and help teachers develop the most effective classroom that drives digital transformation.

Identification - data analysis allows us to understand that adaptive *AI solutions* will identify important areas for students. The application of AI in education has been the subject of large number of research in the last 30 years. Experts predict that the use of *AI* in education will increase by more than 45% by 2024.

OBJECTIVES OF AI IN EDUCATION

- To provide an overview of AI in education.
- To examine the impact of AI to students and teachers.
- To identify the key issues and trends of AI tools in education system.

REVIEW OF LITERATURE

Based on the review and detailed analysis of available scientific and professional papers, several relevant ones from the area of AI in education have been singled out.

Sadiku et al. explain the concept of artificial intelligence as the ability of a computer system to perform human tasks (such as thinking and

learning) that can usually only be achieved through human intelligence. AI technology in education provides a degree of flexibility and adaptation that has never been possible before. This is revolutionizing schools and classrooms, making the job of a teacher much easier. AI is ready to revolutionize education. The paper considers different applications of AI in education.

Joshi et al. first state that the use of AI is now observed in almost all areas of our lives. Artificial intelligence is an advanced technology that transforms all aspects of our social interaction. In education, it will develop new learning solutions that will be tested in a variety of situations. Educational goals can be better achieved and managed by new educational technologies. The paper analyzes how AI can be used to improve teaching outcomes, providing examples of how AI technology can help teachers use data to improve equity and education rankings in developing countries. It aims to examine the perception of teachers and students about the use and effectiveness of AI in education. Further research on the generational and geographical diversity of teacher and student perceptions can contribute to the more effective implementation of AI in Education (AIED).

It describes how artificial intelligence can be used and how it is used in the education sector. According to the 21st International Conference on Artificial Intelligence in Education held in 2020, AIED is one of the currently emerging areas of educational technologies. The use

of AI by teachers remains unclear on how to achieve pedagogical advantage on a broader scale and how AI can influence teaching and learning in higher education. The paper presents the impact of AI in education and its advantages and disadvantages. The author also describes a specific way of developing a platform for education based on AI, and finally the additional effects of AI in education.

It states that the use of AI in education is no longer science fiction, but is becoming a reality in these times of unprecedented dynamic change. This field encompasses a wide range of techniques, algorithms, and solutions that can solve current adversities and problems in today's classroom. The paper discusses how an existing world-supporting AI can be extended to the fields of education and addresses the existing challenges of using AI in classrooms across Singapore.

It assesses the impact of AI on education. Assuming a narrative and assessment framework for the AI identified from the preliminary analysis, the scope of the study was limited to the application and effects of AI in administration, teaching, and learning. A quality research approach, which used literature review as a design and approach to research, was used and effectively facilitated the achievement of the purpose of the study. AI is a field of study and resulting innovations and

developments that have culminated in computers, machines, and other artefacts that have human-like intelligence characterized by cognitive abilities, learning, adaptability, and decision-making ability. The study found that AI was largely adopted and used in education, especially in educational institutions, in various forms. AI was initially in the form of computers and computer technologies, moving to intelligent education systems based on the web and network, and finally with the use of embedded computer systems, along with other technologies, the use of humanoid robots and web chat. Using these platforms, instructors were able to perform a variety of administrative functions, such as reviewing and grading student assignments more effectively and efficiently, in achieving higher quality in their teaching activities. On the other hand, since the systems support machine learning and adaptability, the curriculum and content are adapted and personalized following the needs of students, thus improving the student experience and the overall quality of learning. It enables stakeholders in the education sector to understand the extent to which artificial intelligence will be used in education and its perceived benefits. The paper offers examples of the use of AI in education, especially in developing countries such as India, where education for all is considered one of the goals of sustainable development. First, the paper gives the reader an overview of artificial intelligence. It has been observed that AI has evolved from simple rule-based systems, through data-based systems, to context-based systems that have advanced capabilities. Next, the paper discusses the approach of using AI in education to improve learning outcomes. As a new technology, artificial intelligence in education will bring about changes in the "learning experience" by having an adaptable learning environment that creates a "personalized learning experience". Finally, the paper presents some examples of the use of AI technology in the education sector to improve the learning experience and the quality of learning.

Huang et al. emphasize that the emergence of innovative technologies has an impact on teaching and learning methods. With the rapid development of AI technology in recent years,

its use in education is becoming increasingly apparent. The article first describes the application of AI in the field of education, such as adaptive learning, evaluation of teaching, *and* virtual classroom. Then its impact on teaching and learning is *analysed*, which has a positive impact on improving teaching levels and learning quality. Finally, the challenges that AI applications may face in education in the future are presented and references

AI IN EDUCATION

Artificial intelligence is becoming more sophisticated, the machine reads the student's facial expressions or gestures and uses them to find out if the student is trying to understand the lecture or needs to change the lesson so the student can easily continue to follow. Adaptation of the academic curriculum can be *done using machines* based on AI. Artificial intelligence tools can enable global classrooms, including those with impaired vision or hearing. Also, *AI can help students who* cannot attend classes due to illness. It also provides several resources for people who speak different languages or has hearing or vision problems. AI can help students with homework or prepare for home testing. For the needs of education, applications of artificial intelligence are being developed, such as mentors for *students*. These applications can also immediately evaluate student essays. Voice assistants help students to talk directly with the educational material that is present on the Internet and installed devices, without any participation of teachers. The use of this technology is expected to escalate in the coming years.

BENEFITS OF AI TO STUDENTS

By immersing students in technology from a young age, we are likely to be giving them a head start in the future workplace – where use of such technology will inevitably become more and more commonplace. But that aside, let's consider some of the ways in which AI is already bringing enormous benefits to learners:

- **Analyse Learning gaps:** Specially designed AI platforms can analyse past performance, and identify learning gaps that can easily go otherwise undetected.
- **Personalisation:** AI can adapt content to the student, creating a personalised learning experience rather than a one- size fits all approach.
- **Questions answered instantly:** With the help of AI students can have their questions answered within seconds rather than waiting for a human response – this has the further advantage of encouraging shy students to ask questions without fear of being judged.
- **Timely feedback & just-in-time learning:** Students can also receive more frequent and timely feedback at the point of learning, when the topic is still fresh in mind and they are more open to learning.
- **Engagement:** Learning with AI allows for gamification and other engaging learning environments such as VR and AR, which can greatly increase student motivation and engagement.
- **Time saving:** Using AI to help generate ideas or structure content frees up student time to focus on higher level skills such as analysis or creativity.

- **Improved accessibility:** With smart data gathering, custom tasks and personalised schedules, the boundaries between students, teachers and educational administrators can be bridged with the help of AI technologies. Barriers based on physical location, language, money can be overcome as we move closer to 24/7 access to all.
- **Neurodiversity:** Some neurodiverse students who may struggle with traditional settings or learning methods thrive in AI powered environments.

BENEFITS OF AI TO EDUCATORS

There are also many ways in which educators are already taking advantage of AI and these benefits are only set to grow:

- **Time saving:** AI can take on many of the time consuming jobs that educators are currently expected to do – for example record keeping, and marking. It can also help streamline the planning process – this freeing up the teacher to engage the creative and very human actions that are required to take learning experience to the next level.
- **Idea & content generation:** AI can save teachers time in creating content, ideas and even learning objectives for teachers to review, amend and use creatively in the classroom, project work or assignments
- **Answering student questions:** In using AI as a personal tutor, students not only benefit but teachers too. More questions can be answered, teachers can track what's been asked whilst focusing their efforts on designing interventions to further engage students and plug any learning gaps.
- **Analysing student performance:** AI can track class attendance, assignment submission and performance on specific tasks to help identify learning gaps or flag up worrying behaviour. This makes it far easier for a teacher to design appropriate interventions in a timely manner.
- **Motivating and engaging students:** In today's fast paced, technology-driven world, people crave fun and exciting methods of learning to keep them engaged.

ROLE OF ARTIFICIAL INTELLIGENCE IN EDUCATION

1. AI can automate basic activities in education, like grading.

While AI might not ever be ready to actually replace human grading, it's obtaining pretty shut. It's currently potential for academics to alter grading for nearly every kind of multiple alternative and fill-in-the-blank testing and automatic grading of student writing might not be so much behind.

2. Students could get additional support from AI tutors

These programs will teach students fundamentals, however up to now aren't ideal for serving to students learn high-order thinking and creative thinking, one thing that real-world lecturers square measure still needed to facilitate. nonetheless that shouldn't rule out the likelihood of AI tutors having the ability to try to these items within the future.

3. AI-driven programs can give students and educators helpful feedback.

AI cannot solely facilitate academics and students to craft courses that are bespoke to their wants, however it may give feedback to each concerning the success of the course as an entire. These sorts of AI systems enable students to urge the support they have and for professors to search out areas wherever they'll improve instruction.

4. It could change the role of teachers.

There will always be a job for teachers in education, but what that role is and what it entails may change because of new technology within the type of intelligent computing systems. As we've already discussed, AI can take over tasks like grading, can help students improve learning, and should even be a substitute for real-world tutoring.

5. Data powered by AI can change how schools find, teach, and support students.

Smart data gathering, powered by intelligent computer systems, is already making changes to how colleges interact with prospective and current students. From recruiting to helping students choose the foremost effective courses, intelligent computer systems are helping make every a neighbourhood of the faculty experience more closely tailored to student needs and goals.

KEY CHALLENGES OF AI IN EDUCATION

One of the significant challenges of AI in education is to ensure that it does not replace teachers. AI should be used as a tool to support teachers and not as a substitute for them. The role of teachers is crucial in shaping the minds and lives of students, and AI should not take that away from them. Therefore, it is essential to use AI in conjunction with teachers to enhance their teaching capabilities.

Another challenge is the lack of data privacy and security in AI systems. AI systems generate and collect vast amounts of data, including personal information about students and teachers. This data must be protected from cyber-attacks and breaches. Therefore, it is necessary to have robust data privacy policies and security measures in place to protect this information.

The last significant challenge of AI in education is the digital divide. Not all students have access to technology and the internet, which limits their ability to benefit from AI tools. Therefore, it is essential to ensure that AI tools are accessible to all students, regardless of their socio-economic background.

OPPORTUNITIES FOR AI IN EDUCATION

AI can revolutionise education by providing personalized learning experiences. AI algorithms can analyse data about students' learning styles, behaviors, and interests to create customised learning paths. This enables educators to offer personalised learning experiences that meet the needs of individual students.

Another opportunity of AI in education is to improve student engagement. AI systems can use gamification techniques to make learning more enjoyable and interactive. This can help students stay engaged and motivated throughout their learning journey.

Lastly, AI can help educators identify learning gaps and provide targeted interventions. AI algorithms can analyse student data to identify areas where students are struggling. Educators can then use this information to provide targeted interventions to support students' learning and help them overcome any challenges.

Future of AI in Education

As per the researches, in the near future, AI in education will step in three main ways, which are:

1. Performance Personalization

With day-by-day development in AI technology and computing power, it will be possible to create personalized curricula through collecting and generalizing the information. Various new AI solution such as "Bright space insights" helps the instructor to track, measure, and monitor the progress of learners, and also help them in this learning journey. It provides a complete picture of the learning journey of a learner across the platform.

2. Violation Bias

Human bias has always remained a hindrance in the education system and also an issue in AI tools. In future, AI in education will find new solutions that can evaluate work and tests exams using established criteria in order to eliminate bias.

3. Combined Assistance

Professors/teachers in colleges usually have masters in their field and have a degree in specific areas of development. But the administrative work is often a frustrating attempt at rapprochement with students. AI in education can solve this problem in the future with smart classrooms with AI assistance who can provide necessary help to the teachers to give their best.

Conclusion

Artificial intelligence and its uses in our lives are growing day by day in many segments. In the field of education, AI has started showing its influences and working as a helping tool for both the students and teachers and supporting the learning process. But still, the use of AI in education is not adapted by all the colleges completely, and it will take a long journey to do this. However, studies show that in the near future, AI will have a good impact on the education sector. It is currently transforming the education industry but is yet to show its real potential in

education. Further, learning from computer systems can be much helpful, but it is unlikely to fully replacing human teaching in schools and colleges.

Schooling today is not as flexible as that which will be supported shortly by the use of artificial intelligence. Traditional learning methods are becoming obsolete and various educational institutions are slowly rejecting them. Smart systems are rapidly changing educational institutions at all levels of education, to help people learn effectively and meet their learning goals.

AI in Education is a computer technology that provides personalized, adaptable, and insightful teaching. It plays an important role in promoting personalized teaching and learning. AI changes the way teachers teach and the way students learn. You will be able to respond to a range of learning styles shortly. Thanks to artificial intelligence, teaching, and learning programs are becoming more advanced. The wave of investment and increased interest in artificial intelligence will affect the education process in the times to come. AI is changing and reshaping the educational landscape, although it will not completely replace the traditional education system. It is wrong to try to completely replace it with AI, but AI technology should be added to the traditional learning process.

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Influence of AI on Advertisement in E-Commerce

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ABSTRACT

Artificial Intelligence (AI) is a branch of computer science that focuses on creating systems or machines that can perform tasks that would typically require human intelligence. The purpose of this study is to evaluate and understand about the the influence and the role of AI in advertisement in the field of E-commerce. The study mainly focuses on the social media platform through which the advertisements are produced. The study also check whether the users are aware about the advertisement pattern through which the e commerce platform influence the customer behaviour .

INTRODUCTION

Artificial Intelligence (AI) is a branch of computer science that focuses on creating systems or machines that can perform tasks that would typically require human intelligence. These tasks include things like understanding natural language, recognizing patterns, learning from experience, and making decisions.

AI can be broadly categorized into two types: narrow AI and general AI. Narrow AI, also known as weak AI, is designed to perform specific tasks within a limited domain. Examples of narrow AI include virtual assistants like Siri or Alexa, recommendation systems used by streaming services or e-commerce platforms, and facial recognition systems.

On the other hand, general AI, also known as strong AI or artificial general intelligence (AGI), refers to AI systems that have human-level cognitive abilities and can perform any intellectual task that a human can. General AI remains largely theoretical and is the subject of ongoing research and debate.

AI techniques commonly used in AI systems include machine learning, deep learning, natural language processing (NLP), computer vision, and robotics, among others. These techniques enable AI systems to analyze large datasets, recognize patterns, make predictions, and interact with humans in natural language.

Alan Turing was the first person to conduct substantial research in the field that he called machine intelligence. Artificial intelligence was founded as an academic discipline in 1956. The field went through multiple cycles of optimism, followed by periods of disappointment and loss of funding, known as AI winter. Funding and interest vastly increased after 2012 when deep learning surpassed all previous AI techniques, and after 2017 with the transformer architecture. This led to the AI boom of the early 2020s, with companies, universities, and

laboratories overwhelmingly based in the United States pioneering significant advances in artificial intelligence.

The growing use of artificial intelligence in the 21st century is influencing a societal and economic shift towards increased automation, data-driven decision-making, and the integration of AI systems into various economic sectors and areas of life, impacting job markets, healthcare, government, industry, and education. This raises questions about the long-term effects, ethical implications, and risks of AI, prompting discussions about regulatory policies to ensure the safety and benefits of the technology.

The various sub-fields of AI research are centered around particular goals and the use of particular tools. The traditional goals of AI research include reasoning, knowledge representation, planning, learning, natural language processing, perception, and support for robotics. General intelligence—the ability to complete any task performable by a human on an at least equal level—is among the field's long-term goals.

To reach these goals, AI researchers have adapted and integrated a wide range of techniques, including search and mathematical optimization, formal logic, artificial neural networks, and methods based on statistics, operations research, and economics. AI also draws upon psychology, linguistics, philosophy, neuroscience, and other fields.

Many of these algorithms are insufficient for solving large reasoning problems because they experience a "combinatorial explosion": they became exponentially slower as the problems grew larger. Even humans rarely use the step-by-step deduction that early AI research could model. They solve most of their problems using fast, intuitive judgments. Accurate and efficient reasoning is an unsolved problem.

Knowledge representation and knowledge engineering allow AI programs to answer questions intelligently and make deductions about real-world facts. Formal knowledge representations are used in content-based indexing and retrieval, scene interpretation, clinical decision support, knowledge discovery (mining "interesting" and actionable inferences from large databases), and other areas.

A knowledge base is a body of knowledge represented in a form that can be used by a program. An ontology is the set of objects, relations, concepts, and properties used by a particular domain of knowledge. Knowledge bases need to represent things such as: objects, properties, categories and relations between objects; situations, events, states and time; causes and effects; knowledge about knowledge (what we know about what other people know); default reasoning (things that humans assume are true until they are told differently and will remain true even when other facts are changing); and many other aspects and domains of knowledge.

Merits of AI on Advertising

- **Targeted Advertising:** AI can analyze vast amounts of data to understand consumer behavior and preferences. This enables advertisers to target their ads more precisely, increasing the likelihood of reaching interested customers.

- **Personalization:** AI algorithms can personalize ads based on individual user data, such as browsing history, demographics, and past interactions. Personalized ads tend to be more relevant and engaging, leading to higher conversion rates.
- **Optimized Campaigns:** AI can continuously optimize advertising campaigns by analyzing performance metrics in real-time. This allows advertisers to allocate their budgets more effectively and improve the return on investment (ROI) of their campaigns.
- **Automated Content Creation:** AI-powered tools can generate ad creatives, copywriting, and even video content, saving time and resources for advertisers. These tools can produce high-quality content at scale, catering to different audience segments.
- **Predictive Analytics:** AI can forecast future trends and consumer behaviors based on historical data and market analysis. Advertisers can use this insight to anticipate market changes and adjust their strategies accordingly.

Demerits of AI on Advertising:

- **Privacy Concerns:** AI-driven advertising often relies on collecting and analyzing user data, raising privacy concerns among consumers. Excessive data tracking and targeting can lead to backlash and damage brand reputation.
- **Bias and Discrimination:** AI algorithms may inadvertently perpetuate bias and discrimination, especially in targeted advertising. Biased algorithms could unfairly target or exclude certain demographic groups, leading to ethical and legal issues.
- **Overreliance on Technology:** Relying too heavily on AI in advertising can result in a lack of human creativity and intuition. While AI can optimize processes and improve efficiency, it's essential to maintain a balance and incorporate human insights into advertising strategies.
- **Algorithmic Complexity:** AI algorithms used in advertising can be complex and opaque, making it challenging to understand how decisions are made. This lack of transparency can lead to distrust among advertisers and consumers alike.
- **Ad Fraud:** AI-powered advertising systems are susceptible to manipulation and fraudulent activities, such as click fraud and bot traffic. Advertisers need to implement robust measures to detect and prevent ad fraud to ensure the integrity of their campaigns.

REVIEW OF LITERATURE

❖ According to Navdeep Singh, Daisy Adhikari

In the dynamic realm of eCommerce, the integration of Artificial Intelligence (AI) has revolutionized advertising strategies, forging a path towards highly personalized consumer experiences. This exploration delves into the multifaceted role of AI in eCommerce advertising, highlighting the efficacy of technologies such as machine learning, natural language processing, and predictive analytics.

A thorough analysis of consumer behavior, underpinned by AI, reveals advancements in data collection, privacy concerns, and innovative data analysis techniques. Ethical considerations, including data privacy and bias in AI algorithms, emerge as pivotal in maintaining consumer trust. The paper presents an array of case studies, illustrating the successful application of AI across diverse industries.

- ❖ According to **Adrian Micu, Angela-Eliza Micu, Marius Geru, Alexandru Căpățînă, Mihaela-Carmen Muntean** *Amfiteatru Economic* 23 (56), 137-154, 2021

This study aims at identifying the tools used in e-commerce, able to optimize marketing campaigns. Managerial and marketing processes have been identified in the relevant body of knowledge that can be optimized using artificial intelligence; thus, a questionnaire has been designed within a quantitative research. The sample used in the research consists of 201 persons having managerial positions, who are involved in e-commerce, their companies' have been their company active in 2020, with at least one employee. The article highlights the managerial tools used in promoting products in the online environment and business processes that they want to optimize using artificial intelligence. At the same time, for the quantitative study, three hypotheses have been tested to identify the motivation to buy online, as well as the methods used by online store managers in the communication process. The limitations of this study are determined by the fact that only the managerial perspective is analysed, without considering the perception of the final consumer, which could have ethical implications. Optimizing the flow of stocks and logistics processes will be the subject of future research considering that it is the main challenge for management, as the quantitative research proved.

- ❖ **A Srivastava** *Contemporary Issues in Commerce & Management* 1 (1), 165-175, 2021

We are living in an era that is full of technologies. Gone were the days when everything can only be done manually. Now technologies have a major role to play in our daily life. One of the technologies is Artificial Intelligence (AI). It becomes part of everyday life and changing the working style of people. Sometimes we even do not know that we are using AI. It can be seen in the form of home automation devices, self-driven cars, applications in smartphones, wearable devices, etc. It transforms everything it is part of. AI is the most progressive technology that the world is witnessing today. In the same way, the E-commerce industry has transformed the way business is done in India. India is the fastest-growing E-commerce market and it is expected to grow at a much higher pace in the coming years. One can see the application of AI in Ecommerce as well. AI is playing a crucial role in the E-commerce industry. The Ecommerce industry is moving towards a major technological change in the form of AI.

The application of AI in the E-commerce industry is increasing drastically in the last decade. The E-commerce industry is using AI to process a large database of progressive customers, communicate with them using chatbots, helps in searching, sorting, and finding a relevant product. AI makes it possible to capture, process, and infer data on a large scale, and it is more efficient and accurate. E-commerce competitors are using AI to create a customer-centric search, retarget potential customers, create a more efficient sales process, voicepowered search, improve recommendations for customers, tackle fake reviews, etc

❖ **Brijesh Sivathanu, Rajasshrie Pillai, Bhimaraya Metri**, International Journal of Retail & Distribution Management 51 (1), 124-145, 2023

The purpose of this study was to investigate the online shopping intention of customers by watching artificial intelligence (AI)-based deepfake video advertisements using media richness (MR) theory and Information Manipulation Theory 2 (IMT2).

Design/methodology/approach

A conceptual model was developed to understand customers' online shopping intention by watching deepfake videos. A quantitative survey was conducted among the 1,180 customers using a structured questionnaire to test the conceptual model, and data were analyzed with partial least squares structural equation modeling.

The outcome of this research provides the antecedents of the online shopping intention of customers after watching AI-based deepfake videos. These antecedents are MR, information manipulation tactics, personalization and perceived trust. Perceived deception negatively influences customers' online shopping intention, and cognitive load has no effect. It also elucidates the manipulation tactics used by the managers to develop AI-based deepfake videos.

Practical implications: The distinctive model that emerged is insightful for senior executives and managers in the e-commerce and retailing industry to understand the influence of AI-based deepfake videos. This provides the antecedents of online shopping intention due to deepfakes, which are helpful for designers, marketing managers and developers.

Originality/value: The authors amalgamate the MR and IMT2 theory to understand the online shopping intention of the customers after watching AI-based deepfake videos. This work is a pioneer in examining the effect of AI-based deepfakes on the online shopping intention of customers by providing a framework that is empirically validated.

Research problem

This research aims to explore how customer engagement with AI technologies, such as chatbots, recommendation systems, and personalized advertising algorithms, influences the effectiveness of advertising campaigns in the e-commerce sector. By understanding the dynamics between AI-driven customer interactions and advertising outcomes, this study seeks to provide insights for businesses to optimize their marketing strategies in the digital marketplace.

Research objectives

- To know about the knowledge regarding influence of ai in e-Commerce advertisement

- To know about customer perception towards advertisement in e-commerce.
- To know about the customer knowledge regarding the role performed by AI in advertisement through social media

RESEARCH METHODOLOGY

The aim of the study is to analyses the artificial intelligence in e-commerce .The data is used both primary and secondary data. The research instrument used in this study is questionnaire. It designed pertaining to the impact of the study. Data is used simple percentage method. The sampling unit for the study is selected by using convenience sampling procedure. The research design used for the study is the convenient research. Sample size for the study is 25 respondents.

Primary Data

Primary data are those which are collected afresh and for the first time and thus happen to be original in character questions and interviews method were accede to collect primary data through questionnaire.

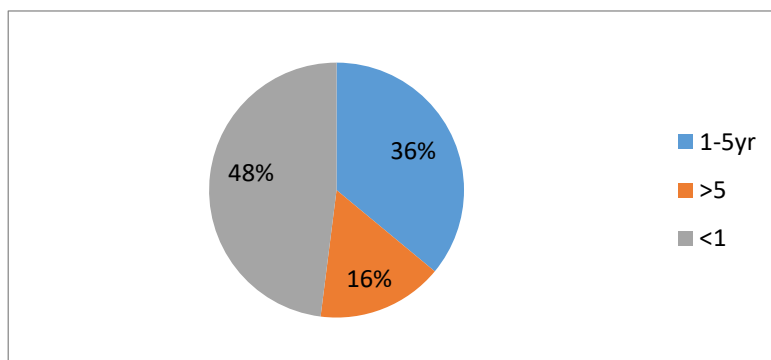
Secondary Data

It is collected from the internal record of company such as library records trade journals various training programs previously conducted and its responds etc... It is also conducted from the officials of the pursued department in the factory. Secondary data provides a better view of problem study many magazines tools and other references were also mean important in this study

DATA ANALYSIS AND INTERPRETATION

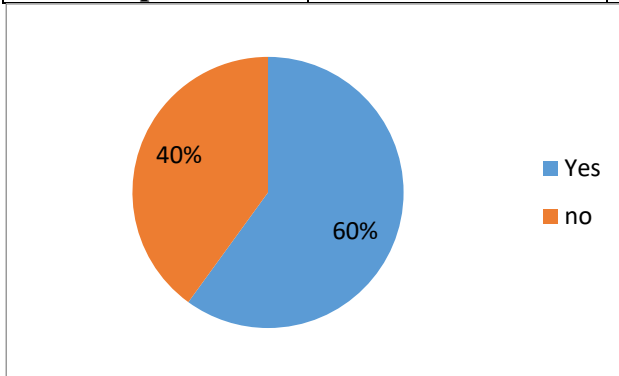
1.How may years you being using E-Commerce?

Years	1-5	>5	<1	Total
No.of response	9	4	12	25



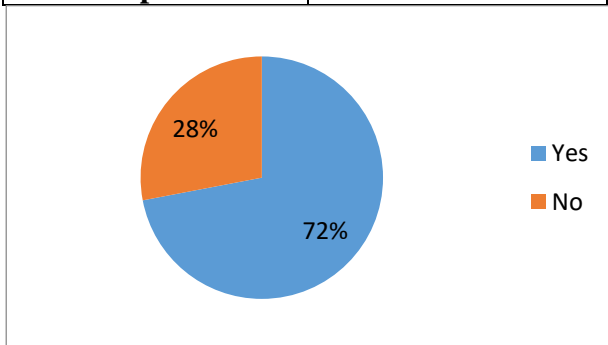
2. Are you a frequent online shopper?

	Yes	No	Total
No.of response	15	10	25



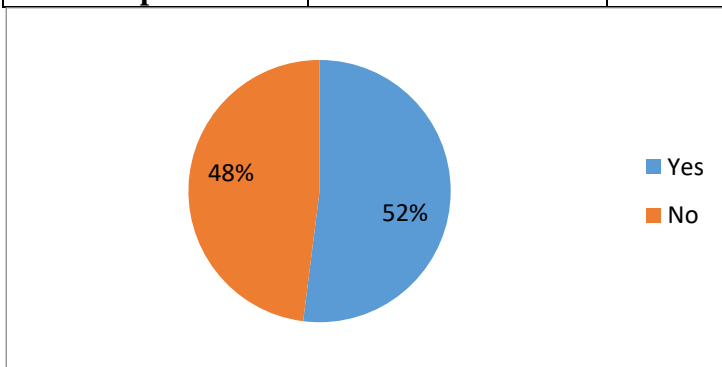
3. Have you ever made a purchase based on the suggestion from an advertisement in social media.

	Yes	No	Total
No.of response	18	7	25



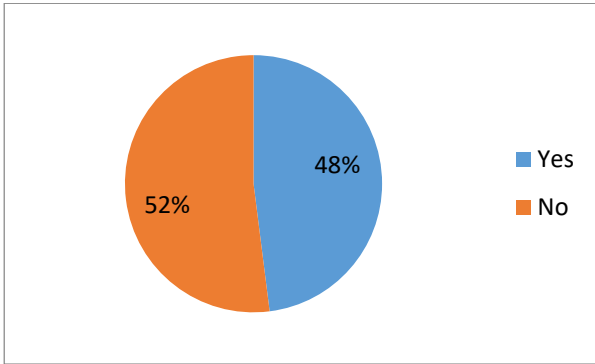
4. Are you familiar with the AI technologies?

	Yes	No	Total
No.of response	13	12	25



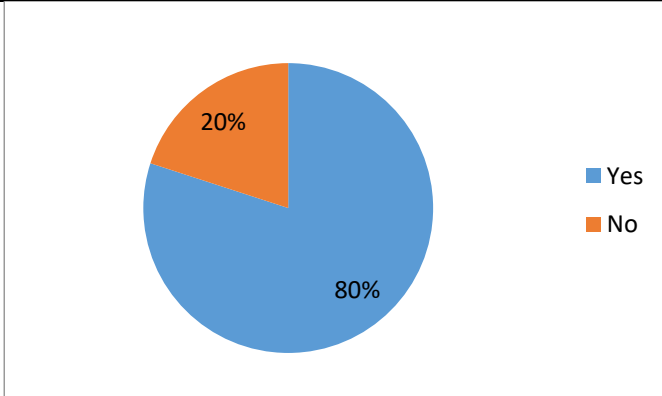
5. Are you aware about the negative impact of AI technologies?

	Yes	No	Total
No.of response	12	13	25



6. Do you agree that the advertisements are much significant in improving customer satisfaction?

	Yes	No	Total
No. of response	20	4	25



FINDINGS

The following findings and conclusion that could enlighten the impact of artificial intelligence on e-commerce in advertisements.

From the analysis we found that 36% of the respondents are using e-commerce 1 to 5 years, 16% of the respondents are using more than 5 years, 48% of the respondents are using less than one year.,60% are frequent online shoppers, 72% of the responses agrees that they bought items on the suggestion they see in social media in which they searched for. Only 52% of the responses are familiar with the AI technologies. Only 48% of the responses are aware about the negative impact AI technologies regarding data privacy ,personal data looting etc.80% of the responses agrees that the advertisements are much significant in improving customer satisfaction as the gets the items which are most required for their searches.

SUGGESTIONS

- The users should be aware about the e-commerce platforms they are using and its privacy control.
- The user should always keep their personal data secure.
- The privacy breakage of the e- commerce platforms should be well aware by its users.

CONCLUSION

In future years, AI is going to acquire even the core activities of the organisation. The use of AI has shown ways to perform complex actions and perform activities like humans. Even though the application is wider, still it can't be used in all activities. AI technology can be used to perform repetitive tasks but still the decision making is done by the humans. It is therefore should be noted that the e-commerce platforms and the social media advertisements are directly linked and personalized as per the requirements and taste of the users on which the data are transformed from their searches and needs they post in various browsing apps and e-commerce platforms.

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A Study on Impact of Artificial Intelligence on Everyday Life among Students

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ABSTRACT

The exponential advancement of digital technology is due to cognitive capacity of artificial intelligence. The field of intelligent machines has grown substantially throughout the prior ten years. This paper focuses on impact of AI on everyday life among students. We engage with AI every day, often without recognising it, in a variety of ways, from deep learning to natural language processing. However, AI is not just found in robots. With the aid of AI, humans will be able to move into better, more skilled positions; all they need is a little training and knowledge. The aim of this study is to analyse the influence of AI on education. The study findings suggest that AI has a positive impact on the learning experience by facilitating the acquisition of new knowledge and skills. This research provides insights into the potential of AI to transform higher education and contribute to the development of new skills for graduates.

INTRODUCTION

Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem solving. In other words, AI refers to the ability of a computer or a computer enabled robotic system to process information and produce outcomes in a manner just like human beings learn, solve and make decisions. Thus, AI tries to solve complex problems in ways similar to human logic and reasoning. The main focus of artificial intelligence is towards understanding human behavior and performance. This can be done by creating computers with human-like intelligence and capabilities. This includes natural language processing, facial analysis and robotics. Artificial intelligence has the advantages over the natural intelligence as it is more permanent, consistent, less expensive, has the ease of duplication and dissemination, can be documented and can perform certain tasks much faster and better than human. Thus is effective in educational technology to make the teaching learning process more effective and concrete with the help of various artificial intelligence teaching techniques.

LITERATURE REVIEW

Pinky Gupta – (IRJET-2021). " Research paper on impact of AI in our Life " This paper highlights on different aspects of usage of AI in every day's life which will have impact of lifestyles of people. It describes the development of AI with the help of device made with synthetic Intelligence. This made the scientists discuss on the opportunities of constructing a digital mind and forthgoing many other scientists invented different techniques like back propagation, neural networks. This paper also covers the usage of AI classified with different age groups and platforms by making surveys.

Mohd Abbas and Gulam Rasool – (IAJRSCT). "Artificial Intelligence in Our Daily Life " In this study author proposed on the lifestyle of individuals. It categorized how AI is used in various applications like in robots, computer vision, Natural Language Processing, Internet of Things, Smarter cars, Education and in Health care.

Ms J. PRABHA – (IJCRT). "A STUDY ON IMPACT OF ARTIFICIAL INTELLIGENCE IN E-COMMERCE " The author of this report places special attention on how AI is affecting e-commerce marketing and aiding in the promotion of name-brand items. AI was divided into weak and strong categories. They also included information on how artificial intelligence is used in fields including video games, expert systems, finance, and health care. With many respondents, this study suggests that artificial intelligence has aided e-commerce companies in offering better user experiences.

M Pradhan, RK Sahu (2011), 'Predict the onset of diabetes disease using Artificial Neural Network (ANN)', International Journal of Computer Science & Emerging Technologies (E-ISSN: 2044-6004) 303 Volume 2, Issue 2, April 2011 The survey has suggested that for diagnosis of diabetes, the ANN technique give better results than other diabetes detecting technology. The proposed systems aims to save the patients from giving a blood sample for test . The diagnosis is based on the early stage symptoms.

Jiixin Luo, Qingjun Meng, Yan Cai (2018), 'Analysis of the Impact of Artificial Intelligence Application on the Development of Accounting Industry', Open Journal of Business and Management, 2018, 6, 850-856, ISSN Online: 2329-3292 The paper concludes that AI is being used more and more in industrial application. Application of AI to industrial

will be the key to problem solving. It is necessary for the universities, enterprises, individuals and the country to work together to bring about an application of the key.

Objectives

1. To study the impact of AI on education.
2. To predict the impact of AI on future careers.
3. AI aids in issue solving with minimal human involvement and challenging tasks.

Role of AI in Education sector

The past fifteen years have seen considerable AI advances in education. Applications are in wide use by educators and learners today, with some variation between K-12 and university settings. Though quality education will always require active engagement by human teachers, AI promises to enhance education at all levels, especially by providing personalization at scale. Similar to healthcare, resolving how to best integrate human interaction and face-to-face learning with promising AI technologies remains a key challenge. Still, schools and universities have been slow in adopting AI technologies primarily due to lack of funds and lack of solid evidence that they help students achieve learning objectives. Over the next five years the use of intelligent tutors and other AI technologies to assist teachers in the classroom and in the home is likely to expand significantly, as will learning based on virtual reality applications. But computer-based learning systems are not likely to fully replace human teaching in schools.

Artificial Intelligence (AI) is changing the world as we know it, and the education system is no exception. AI has become an effective tool for addressing challenges in education and accelerating progress towards SDG 4. With its ability to collect and analyze data, AI can inform educators of students' engagement, learning progress, and well-being. It also has built-in digital apps and tools that allow for teacher interaction and individual progress monitoring.

AI has the potential to transform education by optimizing teaching and learning processes through personalized learning algorithms. By identifying strengths and weaknesses of each student, AI can tailor educational materials to suit individual needs better. Virtual reality experiences could be created without leaving the classroom to engage with students from far

countries or showcasing historical sites that endanger undue ecological harms if used a long time ago; this provides learners with an interactive learning environment that improves understanding retention.

Augmented reality technology implemented using AI promises a more engaging learning experience for students, allowing them to interact with virtual objects in ways previously impossible. By placing real-time information onto what people see around them using devices or smartphones on smart boards or screens within classrooms create new immersive experiences transforming how people share information effectively.

While the benefits of AI in education are profound, policymakers need to identify risks associated with implementing these technologies fully effectively. The use of sensitive data raises questions on privacy or equity considerations necessitating transparent policies on how such data is collected stored secured shared among stakeholders which must consider critically if they are expanding their pedagogical objectives through technological innovations rather than amplifying existing biases habits entrenched within curricula schooling methods which limit creativity critical thinking or diversity among other concerns when initiating incremental improvements leveraging machine-generated insights or conclusions.

Advantages Of AI In The Education System

One of the most significant advantages of AI in the education system is personalized learning. AI-powered systems can generate customized lesson plans and assessments for each student, based on their unique learning abilities and needs. This ensures that students receive an optimized learning experience, leading to increased engagement and better performance.

Additionally, AI can provide better access to learning for students with special needs. With intelligent tutoring systems, AI-powered devices can identify the areas where a student needs additional support and provide tailored guidance accordingly. This helps students who may require extra time or help in certain subjects to keep up with their peers.

Another advantage of AI in education is that it allows for real-time problem-solving assessment. Teachers can use this technology to track how well their students are understanding concepts by monitoring individual progress throughout a lesson or course. By doing so, they become aware of areas where more attention is needed and thus provide specific solutions.

Overall, the benefits provided by AI are changing how we teach and learn in remarkable ways; it provides a diverse range of opportunities for learners around the world no matter their individual circumstances.

AI-Powered Personalized Learning

AI is transforming the education landscape by providing personalized learning methods to students. Personalized learning enhances engagement and motivation for students which are key factors in their academic success. AI can capture, aggregate, and analyze data to build student learning profiles. By analyzing the data of each individual's learning preferences, strengths, and weaknesses, AI can suggest personalized learning methods and provide additional tutoring when needed.

Apart from personalized learner support, AI analysis can also enable better-informed decisions for educators and administrators. Through the collection of large amounts of student data from grading patterns to test scores presented in user-friendly dashboards or reports by AI platforms, educators can gain insight into critical areas that need improvement such as tracking student progress effectively over time, optimizing curriculums based on real-time analysis of a class's needs or understanding which topics pose the greatest challenge.

The ability for AI-powered personalized learning systems to evaluate massive amounts of information about learners has made it more clear that equitable access should be provided to information resources so as not to increase inequities between learners from various income levels or backgrounds through increasingly supportive technologies rather than isolating tools used outside instructional settings.

AI-powered personalized learning offers many benefits regarding enhancing engagement and motivation among students while also enabling teachers and administrators' better-informed

decision-making process(es). The framework provided by these technologies will undoubtedly prove useful in designing an educational system that is more inclusive while effectively serving all learner groups evenly.

AI-powered Assessment And Evaluation

AI-powered assessment and evaluation is a game-changer in the education system. AI has the potential to improve accuracy, efficiency, and fairness in assessments and evaluations. With AI, student learning can be measured more accurately, providing deeper insights and facilitating individualized learning processes.

AI can automate administrative tasks such as test evaluation, allowing teachers more time to focus on teaching rather than grading tests. The use of AI in grading essays can not only save time but also provide instant feedback to students. Additionally, AI-powered evaluations can improve physical and cyber security through biometric solutions.

One of the most important benefits of using AI for assessments is its ability to favor candidates based solely on their merit while minimizing human bias towards students' demographic information such as race or gender. This fosters a fairer system where students are evaluated based on their skills rather than any other discriminatory factors.

Europe has proposed a legal framework on AI that addresses risks related to biased decisions or errant automated judgments during assessments. Therefore it is important that schools who plan on adopting this technology ensure there are strict ethical guidelines in place when using these powerful systems.

AI-powered assessment and evaluation will be an important tool for modernizing the education system by making evaluations faster, unbiased and effective at identifying areas where students need help; thus better preparing them for a successful future in their respective fields.

AI-powered Student Support And Engagement

With the rise of artificial intelligence (AI), the education system has embraced technology to improve student engagement and support. One way AI is being used in classrooms is through chatbots. These chatbots offer personalized and interactive learning experiences to students, providing 24/7 support while improving accessibility. By generating unique conversations with each student, AI-powered chatbots can help instructors manage huge class sizes.

AI technology also provides data analytics that can help educators stay informed about their students' progress, engagement, and well-being. With this information at hand, teachers can tailor their lessons to meet individual needs and identify areas where students require additional assistance.

Furthermore, introducing the concept of AI at an early stage can help students be digitally ready for future academic success. Educators have a role in educating learners on the ethics of AI use while demonstrating practical applications of its uses in academic fields such as emotional wellbeing and streamlining educational procedures.

In summary, it is evident that AI technology has immense potential to improve student engagement and support. From generating unique conversations with every learner through chatbots to enabling advanced data analysis for educators to track every student's learning journey- these tools constitute resources that build personal connections between disruptive technologies as well as human interaction for optimal learning outcomes in classrooms today.

Challenges And Concerns Of AI In Education

The integration of Artificial Intelligence (AI) in education has brought different challenges and concerns that have surpassed policy debates and regulatory frameworks. Privacy breach is one of the main risks; students and instructors may view AI systems negatively. Therefore, measures must be taken to ensure data security while taking advantage of technology's benefits.

Another significant challenge is the accessibility of AI-powered tools and platforms. To make technology inclusive, we must provide equal opportunities regardless of socioeconomic status or location. However, there are concerns about AI perpetuating existing biases and discrimination in education. This mainly happens with personalized learning materials that can reinforce values associated with cultures or ethnic groups, whether intentionally or not.

Policy makers and district leaders need to ensure they are implementing AI applications while considering potential benefits and risks without including ethical issues. They should promote informed consent as it is fundamental when using certain types of personalized learning technologies that involve collecting personal data from learners. The best way to address these ethical dilemmas is by following transparency principles within educational institutions.

Artificial Intelligence has the potential to overcome different obstacles in education like innovating teaching practices effectively. Still, it represents countless unknowns since a successful evaluation cannot currently be measured based solely on conventional parameters such as grades or class performance evaluations by teachers alone considering all the considerations needed before implementing Automatic grading systems effectively across National Education System today .

Ethical Considerations In AI-powered Education

AI has the potential to revolutionize education, but its implementation and use come with ethical challenges. These challenges include privacy and surveillance, bias and discrimination, and the role of human judgment. As AI becomes more prevalent in education systems globally, it is important to educate teachers and students alike on these ethical considerations.

One of the biggest concerns with AI in education is privacy invasion. As more student data is collected and stored in online platforms powered by AI, schools must take steps to ensure that this information is kept confidential to avoid any breaches or leaks. Surveillance is also an issue as facial recognition technology becomes more common in schools. Its use may lead to unethical tracking of students' movements if not monitored properly.

Bias and discrimination are other areas where AI can pose a challenge in education. The algorithms behind these technologies can perpetuate existing prejudices, further marginalizing underrepresented groups such as women or ethnic minorities. Additionally, it raises concerns about decision-making based on data that may be incomplete or unreliable.

Moreover, while AI-based systems can combat cheating and plagiarism effectively using advanced detection tools that analyze writing styles for similarities across files submitted by different students - there are still ethical concerns around balancing academic integrity with individual learning needs.

As rapid technological advancement outpaces policy debates and regulatory frameworks internationally; therefore stakeholders at all levels should work collaboratively towards creating policies informed by ethical considerations whilst finding ways of using the benefits enabled by Artificial Intelligence technologies safely for all involved parties; thus ultimately promoting responsible usage of such tools within educational settings worldwide. These will help unlock new possibilities that advance progress towards ensuring access towards quality learning experiences thereby achieving successful outcomes long term for current generations as well as future ones too!

Future Of AI In Education And Its Potential Impact

AI is poised to revolutionize education and address long-standing challenges in the industry. With the AI education market projected to reach \$20 billion by 2027, there's no doubt that this technology has a bright future in classrooms around the world.

One of the key benefits of AI in education is its ability to reduce the burden on teachers and streamline administrative tasks. Personalized learning, automated grading, and intelligent tutoring systems are just some of the ways AI is changing how students learn and how educators work. By automating routine tasks, teachers have more time for one-on-one interactions with students or to focus on more creative aspects of teaching.

However, there are concerns about the effectiveness of AI-based education products and services. While these technologies can provide personalized feedback, they may not be able to fully replicate human interactions. Additionally, there's a need for policy debates and regulatory frameworks for ethical use of data collected from students.

Despite these concerns, it's clear that AI has immense potential to unleash productivity and potential in the field of education. As schools continue to adapt to modern technological advancements allowed by AI solutions, we can expect further growth in this sector with an emphasis on optimizing efficient communication between educators and learners while creating intelligent constructs that facilitate socialization among peers – whether it be remotely or within physical classroom settings.

Conclusion.

Artificial Intelligence can play a crucial role in personalizing learning, enabling content, pace and teaching style to be tailored to individual students' needs and preferences. Through AI systems, personalized learning programs can be created that foster the development of unique human skills by focusing on each student's specific strengths and interests. AI-based technologies can also facilitate communication and collaboration between students and between students and teachers. These tools can promote the development of unique human skills, such as communication, negotiation or teamwork skills. AI can be used to give students access to innovative resources and tools, such as design software or creative virtual assistants. These technologies can stimulate creativity and critical thinking, giving students opportunities to explore new ideas, develop their imaginations, and find innovative solutions to complex problems. By personalizing learning, continuous and formative assessment, fostering collaboration and communication, encouraging creativity and critical thinking, and developing complex problem-solving skills, AI can help create a new educational environment that holistically develops the skills essential for success in a world of continuous digitization.

By providing personalized, accessible, and effective learning experiences, AI has the potential to revolutionize the education sector. However, educators, policymakers, and technology developers must work together to ensure that AI-driven learning tools are used ethically and responsibly.

In conclusion, all stakeholders in education need to recognize these issues and strive to implement ethical and responsible AI practices. Ultimately, striking a balance between the benefits AI can provide and the ethical concerns it raises will be essential for successfully integrating AI in education.

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CompassSquare

"Beyond the Degree: Crafting Your Career Compass"

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Abstract

The aim is to create an aim combination of knowledge and awareness regarding the different competitive exams provided by both the private and government sectors. An app that answers all the queries regarding different turning points of life. This guides you and supports you till the knowledge is acquired and achieve, what you dreamt of. The app is designed to help users find information about government and private exams, job opportunities, and mock exams to build confidence. It also offers 24-hour AI services for queries and semi-career guidance.

CompassSquare is a student-led initiative designed to provide a comprehensive support system for career exploration and professional development. In the dynamic landscape of career opportunities, students often find themselves in need of guidance to navigate their futures successfully. Recognizing this critical need for support and clarity, we've developed an app to serve as a backbone for students in our college, empowering them to build their potential and courageously shape their futures.

Introduction

Young individuals are the most valuable treasure each country has to offer, even though most of them have several skills they find themselves in several crucial situations and find the reality of unemployment. Due to this migrating to several foreign countries for the sake of finding jobs and further studies has been turned into a new trend. Even though there are several jobs in front of their eyes it seems like no one notices. Students after completing higher secondary, degree education in Kerala are not very aware of government competitive exams like PSC or other opportunities in the private sector. And the several courses they can turn into. So we introduce an app for the seekers so they can find their right career, upskill their potential to build a better version of themselves and make progress in society.

Methodology

The app is designed to help users find information about government and private exams, job opportunities, and mock exams to build career confidence. It also offers 24-hour AI services for queries and semi-career guidance. The app's primary focus is to provide users with valuable resources and assistance in navigating the complexities of career development.

Comprehensive details about various government and private exams, including eligibility criteria, exam patterns, syllabus, and important dates. Updates on exam notifications, changes in patterns, and other relevant information. Guidance on exam preparation strategies recommended study materials, and tips for success.

Listings of job openings from both government and private sectors across various industries and job roles. Information on job requirements, responsibilities, and application procedures. Tools to help users search and filter job listings based on their preferences and qualifications.

Access to a library of mock exams designed to simulate real exam conditions and help users assess their knowledge and readiness. Detailed feedback and performance analysis to identify strengths and areas for improvement. Customizable mock exams tailored to specific exam patterns and syllabi.

The AI-powered chatbot is available round-the-clock to assist users with queries related to exams, job opportunities, career guidance, and any other concerns. Ability to provide personalized recommendations and suggestions based on user preferences and historical interactions. Integration with natural language processing technology for seamless communication and accurate responses. Advancements in AI technology for personalized user experiences

Basic career guidance resources to help users explore different career paths, understand industry trends and identify potential opportunities. Information on skill development, resume writing, interview preparation, and other essential aspects of career advancement. Guidance on setting career goals, making informed decisions, and navigating professional challenges.

The app's innovative feature of generating worksheets and mock question papers through AI, based on previous question banks, enhances its value proposition. This functionality enables candidates to access a vast pool of tailored questions, fostering deeper learning and preparation. Addressing challenges like competition and security concerns remains crucial, necessitating strategic partnerships and robust cybersecurity measures. Opportunities for collaboration and expansion further bolster its potential. With a commitment to user needs and technological innovation, the app stands poised to empower candidates and excel in the competitive landscape of exam preparation and job search.

The app's AI analyzes existing question banks, recognizing patterns to generate new questions for worksheets and mock exams. It customizes questions based on user preferences, ensuring alignment with exam syllabi. Quality checks guarantee accuracy and relevance. Through a feedback loop, the AI refines question generation, adapting to user interactions and enhancing the app's functionality. This automated process streamlines practice material creation, offering users a varied selection of high-quality questions tailored to their proficiency levels and study needs.

Overall, the app serves as a comprehensive platform for users to access valuable information, resources, and support to enhance their career prospects and achieve their professional goals.

Benefits

- **Comprehensive Information:** Users have access to a wide range of information about government and private exams, job opportunities, and mock exams all in one place. This saves time and effort in searching for relevant information from multiple sources.
- **24-Hour AI Services:** The availability of AI-powered services round-the-clock ensures that users can get assistance with queries and semi-career guidance at any time, catering to their needs even during odd hours.
- **Mock Exams for Confidence Building:** The provision of mock exams helps users build confidence by allowing them to practice under simulated exam conditions. Detailed feedback and performance analysis further aid in identifying strengths and areas for improvement.
- **Collaboration Opportunities:** Collaboration with educational institutions for exam preparation resources and potential partnerships with other entities open up avenues for enhanced content and services, enriching the user experience.
- **Personalized Recommendations:** Integration with AI technology allows for personalized recommendations and suggestions based on user interactions, ensuring that users receive tailored guidance and support suited to their individual needs.
- **User-Friendly Interface:** The app features a user-friendly interface, making it easy for users to navigate and access information quickly and efficiently. This enhances the overall user experience and encourages user engagement.
- **Secure and Scalable Infrastructure:** Secure data storage and privacy controls instill user trust, while a scalable infrastructure ensures that the app can handle increasing user traffic and demand without compromising performance.
- **Diverse Revenue Streams:** The app offers multiple revenue streams, including subscription fees, advertising partnerships, and commission-based revenue, ensuring sustainability and profitability in the long run.
- **Targeted Marketing Strategies:** Targeted marketing campaigns, slogans, and tweets across various channels effectively reach and engage the app's target audience, driving user acquisition and retention.
- **Comprehensive Career Support:** In addition to exam preparation, the app provides semi-career guidance, helping users explore career paths, develop essential skills, and navigate the job market effectively, thereby empowering them in their career journeys.
- **Customization:** The AI algorithm can customize the generated questions based on user preferences, such as selecting specific topics or adjusting the difficulty level to match the user's proficiency.
- **Feedback Loop:** As users interact with the generated questions, the AI algorithm collects feedback data, such as user responses and performance metrics. This feedback loop allows the algorithm to continuously improve its question-generation process over time, adapting to user preferences and refining its predictive capabilities.

Conclusion

In conclusion, the app's unique offerings like 24-hour AI support and mock exams present a strong opportunity for success. Addressing weaknesses such as competition and security concerns requires strategic partnerships and continuous innovation. Opportunities like collaboration with educational institutions and expansion into additional services bolster its potential. By employing effective business strategies and maintaining a user-centric approach, the app can establish leadership in the education and job market industry. Overall, with its focus on user needs and technological innovation, the app has the potential to empower users and become a valuable resource in exam preparation and job search. Through a feedback loop, the AI refines question generation, adapting to user interactions and enhancing the app's functionality. AI plays a crucial role in enhancing the app's functionality by automating the process of generating practice materials and providing users with a diverse range of high-quality questions tailored to their needs and preferences.

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A Study on Impact of AI on Developing Workforce

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ABSTRACT

As Artificial intelligence (AI) continues to advance, its impact on the global workforce, particularly in developing nations has become a subject of significant concern and interest. This abstract presents a comprehensive review of the literature examining the multifaceted impact of AI on the developing workforce, encompassing employment dynamics, skill requirement and socio-economic disparities. Drawing upon a diverse range of studies and reports, the abstract highlights to the potential benefits of AI adoption in enhancing productivity and innovation, while also addressing the challenges related to job displacement, skill mismatches and unequal access to opportunities. Additionally, it sheds light on emerging strategies and initiatives aimed at mitigating the negative consequences of AI on vulnerable populations and fostering inclusive growth by synthesizing current research findings. This abstract contributes to a deeper understanding of the complex interplay between AI technologies and workforce development in developing contexts, offering insights for policymakers, educators, employers, and other stakeholders navigating the evolving landscape of work in the digital age.

1. INTRODUCTION

In the realm of technological advancement, artificial intelligence (AI) stands as a transformative force reshaping industries, economies and societies worldwide. As the adoption of AI accelerates its repercussion on the global workforce, particularly in developing regions, have become increasingly pronounced. This introduction searches the stage for a comprehensive exploration of the multifaceted impact of AI on developing workforce dynamics. The proliferation of AI technology including machine learning, natural language processing and robotics has created a new era of automation, augmentation and optimization across various sectors. While AI holds the promise of enhancing productivity, efficiency and innovation, its disruptive potential on employment patterns, skill requirements and social-economic structure cannot be overlooked.

In developing Nations, labour intensive industries often serve as primary sources of employment and economic growth, the advent of AI presents both opportunities and challenges. On one hand, AI-driven automation could streamline operations, boost output and unlock new avenues for economic development. On the other hand, concerns about job displacement, skill mismatches and widening

inequalities from large, raising questions about the inclusivity and sustainability of AI driven growth trajectories.

This introduction lays groundwork for an examination of the key dimensions shaping the impact of AI on the developing workforce. It underscores the importance of understanding the interplay between technological innovation, labour dynamics and social-economic context in navigating the complexities of AI adoption. By illuminating the opportunities, challenges and implications of AI-driven workforce transformation, this introduction sets the stage for informed discourse and evidence-based policymaking aimed at fostering equitable and sustainable development in the digital age.

1.2 STATEMENT OF THE PROBLEM

The rapid advancement and under spread adaptation of artificial intelligence (AI) technologies present a profound and multifaceted challenge for the workforce in developing nations.

AI and machines increase labour productivity by automation routine tasks while expanding employee skills and increasing the value of work. As a result, in a machine-for-machine employment model, low-skilled jobs will disappear, while new and currently unrealized job roles will emerge.

1.3 OBJECTIVES

The objectives of research paper as under:

- To predict how AI adoption will influence job creation, job displacement, and skill demands in developing economies.
- For exploring strategies for upskilling and reskilling the workforce to adapt to the changing demands of AI-driven industries.
- For examining the potential of AI to enhance productivity and economic growth in developing regions
- To investigate the challenges and barriers faced by developing countries in adopting and integrating AI into their workforce.

1.4 SCOPE OF THE STUDY

Studying the impact of artificial intelligence (AI) on the developing workforce involves examining various aspects such as; employment trends, skill requirements, human-AI collaboration, reskilling and up-skilling strategies.

1.5 RESEARCH METHODOLOGY

The research methodology used in the study is mainly designed as an empirical work based on both secondary data and primary data obtained through sources of data.

- PRIMARY DATA

This study makes use of primary data. The primary data is collected through using questionnaire.

- SECONDARY DATA

The secondary data has been mainly collected for creating theoretical background for this study. Main sources of secondary data are websites, books, journals, magazines...etc.

SAMPLING METHOD

Convenience sampling method has been chosen for selecting the sample for this study.

SAMPLE DESIGN

The study is conducted on the basis of 50 selected sample and findings are drawn based on their response.

1.6 TOOLS OF ANALYSIS

The required data for the study has been collected through questionnaire. Graphs are used to present data and percentage analysis used for data analysis.

2. THEORETICAL FRAMEWORK

2.1 DEFINITION; ARTIFICIAL INTELLIGENCE

Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think and learn like humans. It involves the development of algorithms and computer systems capable of performing tasks that typically require human intelligence. These tasks include problem-solving, speech recognition, learning, planning, perception, and natural language understanding.

Machine learning is a crucial subset of AI that involves the use of algorithms and statistical models to enable computers to improve their performance on a task over time without being explicitly programmed deep learning, a subset of machine learning, involves artificial neural networks and has been particularly successful in tasks such as image and speech recognition. AI applications are diverse and spar various fields, including healthcare, finance, education, autonomous vehicles, robotics and more. As AI continues to advance, it prompting ongoing discussions about responsible AI development and deployment.

2.2 DEFINITION; WORKFORCE

In the study of the impact of artificial intelligence on the developing workforce, “workforce” typically refers to the collective body of individuals who are employed or available for employment within a particular region, industry or sector. This includes both skilled and unskilled workers as well as those seeking employment. The impact of AI on the workforce encompasses changes in job roles, skill requirements, employment opportunities and the overall structure of the labor market.

2.3 AI INTEGRATION IN WORKPLACE

AI Integration in the workplace involves leveraging artificial intelligence technologies to streamline operations, enhance decision-making processes, automate repetitive tasks and improve overall efficiency and productivity. This can include deploying AI-powered chatbots for customer service using machine learning algorithms for predictive analytics, implementing natural language processing for data analysis and incorporating Computer vision for image recognition tasks. It also involves ensuring proper data privacy and Security measures are in place to protect sensitive information. Overall, AI integration can revolutionize various aspects of the workplace, leading to cost Savings, Increased accuracy and innovation.

SOME EXAMPLES OF AI TOOLS USED IN WORKPLACE

1. Gemini
2. ChatGPT
3. Copy.Ai
4. Chatbots
5. Grammarly
6. Fireflies

2.4 HOW WORKFORCE ARE BENEFITED

1. Increased Efficiency and productivity: By streamlining processes and providing data-driven insights, AI can help workers become more efficient and productive in their roles.
2. Improved safety: AI can be used to monitor and analyze workplace conditions, helping to identify potential hazards and improve overall safety for workers.
3. Enhanced Decision making: AI algorithms can process vast amounts of data and provide valuable insights to support decision-making processes, empowering workers to make better informed choices.

4. **Creation of New Job Roles:** While AI may automate some tasks, it also creates opportunities for the development of new Job roles related to AI development, implementation, and maintenance.

Overall, the impact of AI on the workforce can lead to increased productivity, better Job satisfaction and opportunities for Career advancement. However, its crucial to address potential Challenges such as job displacement and the need for upskilling and reskilling Initiatives to ensure that workers can fully benefit from the opportunities presented by AI.

2.5 DECISION MAKING, PLANNING, FORECASTING & SO ON

1. DECISION MAKING-

- Decision support systems use AI to assist in Complex decision-making processes by providing relevant information and predictions
- Machine learning techniques enable AI systems to learn from past decisions and adapt their strategies overtime.

2. PLANNING-

- AI-powered planning systems generate optimal sequences of actions to achieve specific goals or objectives.
- Planning systems in AI often utilize techniques like constraint satisfaction and reinforcement learning to find effective solutions.

3. FORECASTING-

- AI models analyze historical data to make predictions about future trends, events or outcomes.
- AI-powered Forecasting systems can provide valuable insights for decision making, risk allocation and risk management.

Overall, AI plays a central role in decision making, planning, forecasting and in various other activities by leveraging data-driven insights, advanced algorithms, and computational power to solve Complex problems and improve decision quality and efficiency.

2.6 CAN AI BE TRUSTED?

Artificial Intelligence is the branch of computer science that focuses on training algorithms using data instead of programing them to carry out specific tasks. We, as a Society run on trust ensuring the trustworthiness of a product, services, or technology is integral if we expect people to embrace. AI is a concept that has created waves due to its effectiveness, but it still has a long way to go. AI research and technology are advancing; algorithms will soon be smarter than human beings. The only obstacle

preventing Robotic supremacy is the AI's inability to understand feelings and morals and deal with unexpected problems and morally complex situations. It is founded on the premise that AI will realize its full potential when trust can be developed in each stage of its lifetime, from design to development, deployment and use.

2.7 FUTURE IMPLICATIONS

1. Creation of new job opportunities.

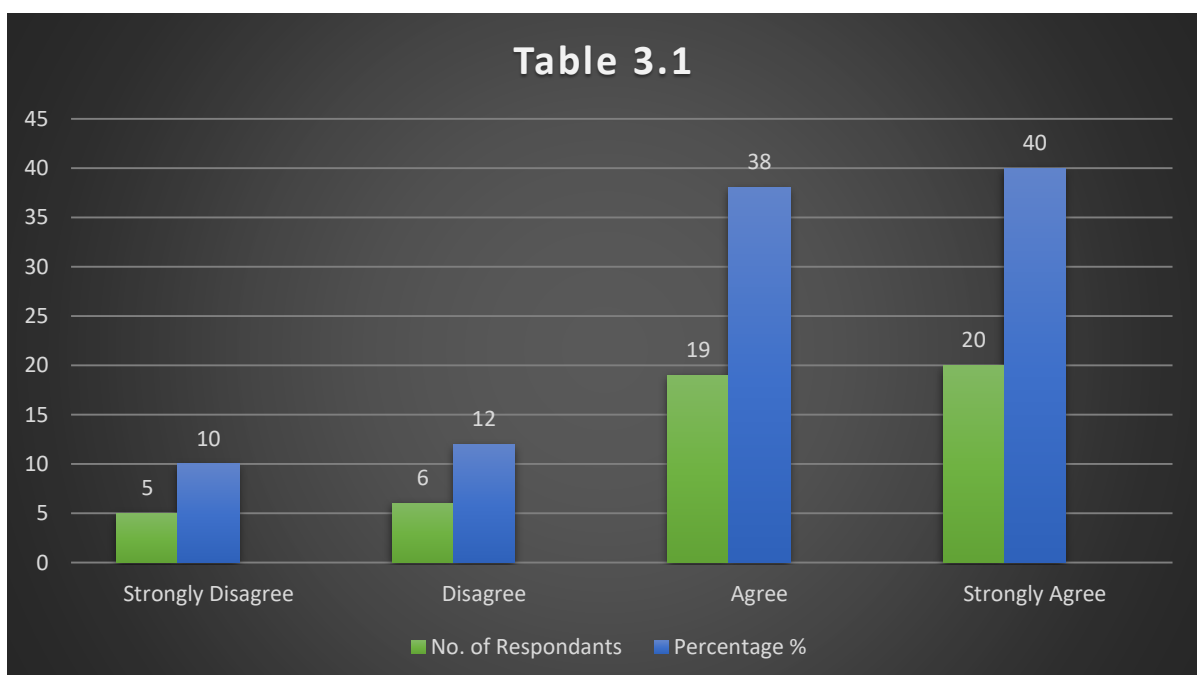
- 1.1 AI Development & Maintenance.
- 1.2 Cyber Security & AI Defense.
- 1.3 Customer Support & service.
- 1.4 AI Training & implementation.

2.8 HOW IS AI DISPLACING JOBS?

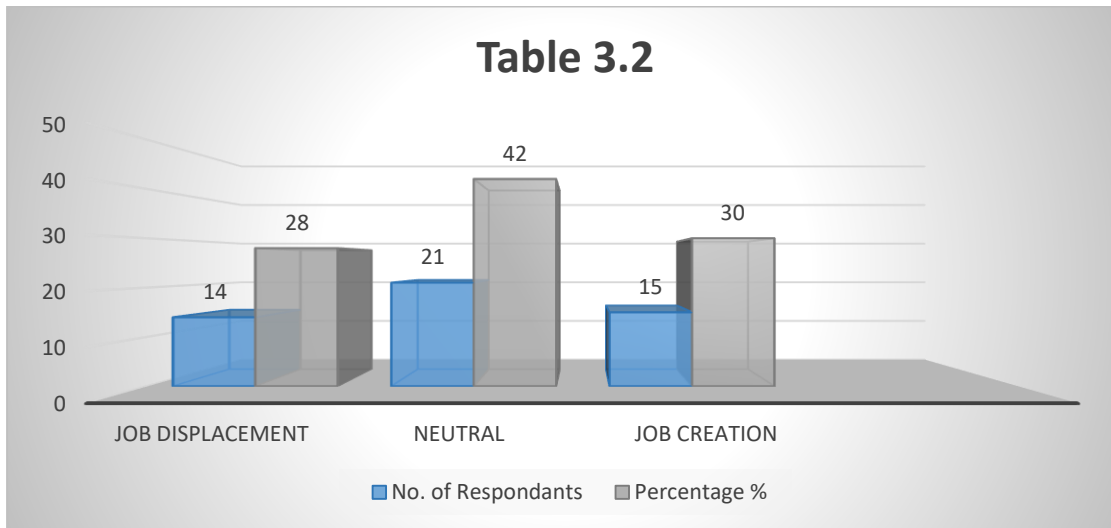
One of the most negative impacts of AI on the Job market is the displacement or elimination of certain types of jobs that are highly susceptible to automation. These include Jobs that are low-skilled, low-paid, Low-educated or Low satisfaction. These include jobs such as cashiers, drivers, factory workers and telemarketers. The extent and pace of Job displacement by AI will depend on various factors such as technological feasibility.

3. ANALYSIS AND INTERPRETATION

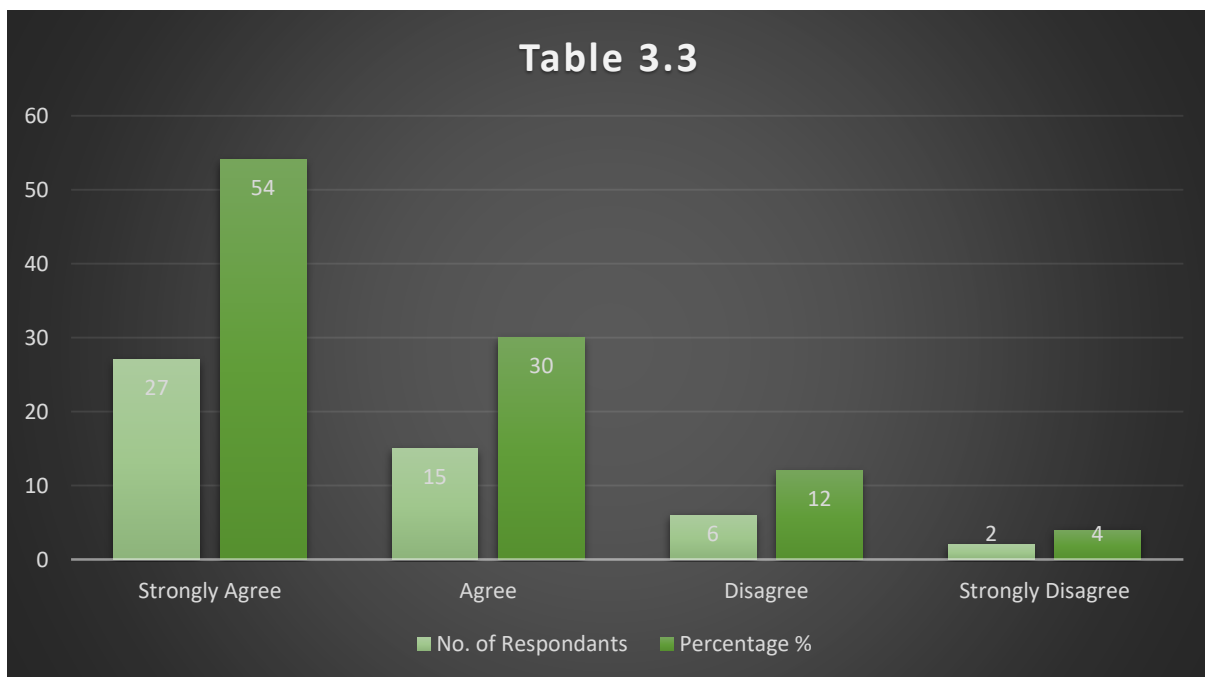
1. Will the jobs created by AI be of similar quality as of human intelligence?



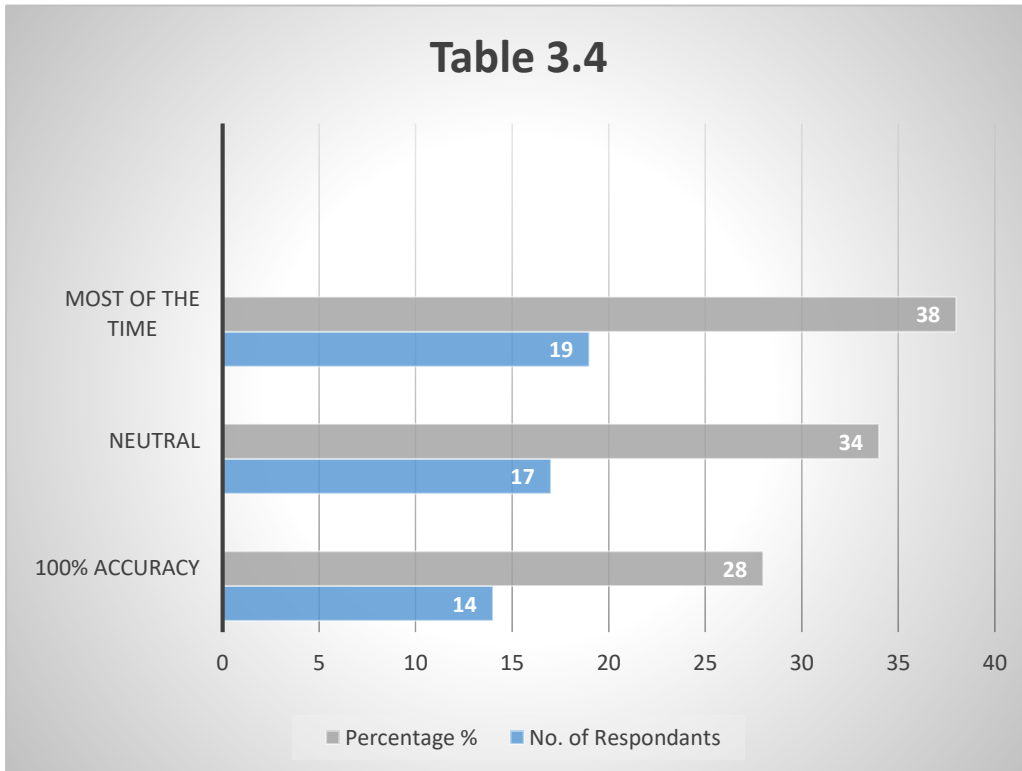
2. What do you think, job displacement or job creation, whichever will be more?



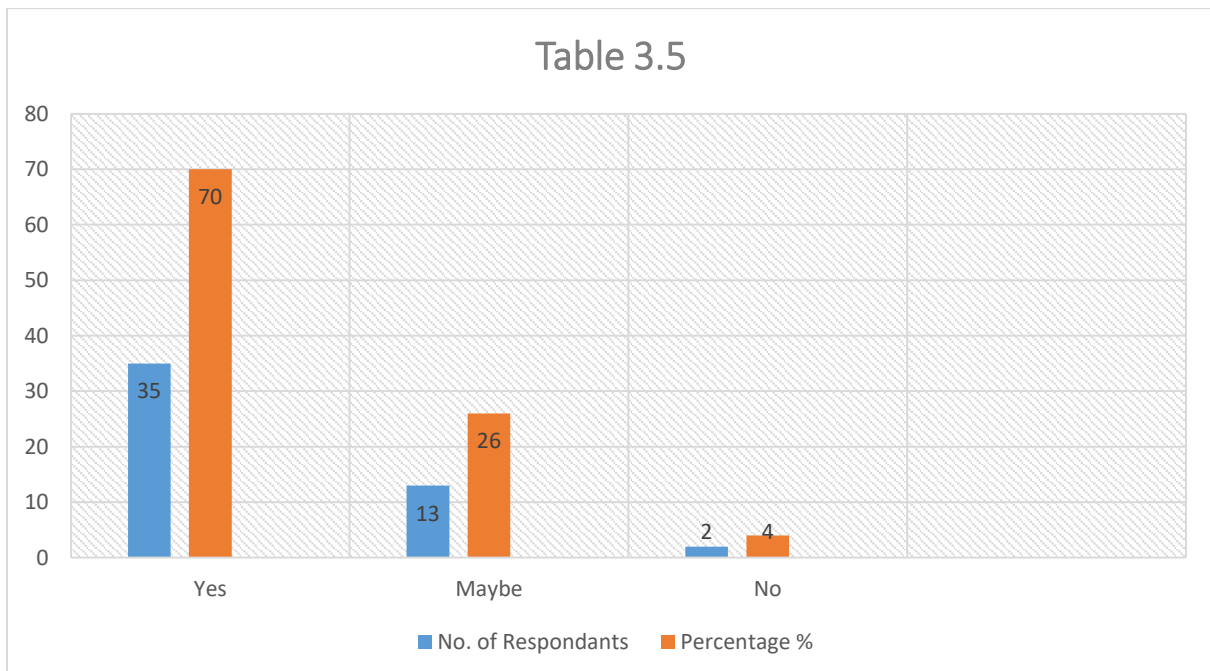
3. Can you agree on the fact that AI has made your job easy while working?



4. How can you ensure that AI produces reliable and accurate solutions?



5. Will you see yourself using AI in the future?



RESULTS

- 40% of the respondents are of the opinion that the jobs created by AI be of similar quality as of human intelligence.

- This study reveals that 54% of respondents are agreeing the fact that AI has made Job easy.
- This study reveals that AI produces reliable and accurate solutions.

AI automation may lead to the displacement of Certain jobs, particularly those involving repetitive tasks. However, it also creates new job opportunities in areas such as AI development, data analysis and Human-AI Interaction. AI provides opportunities for entrepreneurship, as individuals can develop AI-driven solutions to address local challenges and create new businesses. Overall, while AI presents challenges for the developing workforce, it also offers opportunities for economic growth, innovation, and improved standards of living when managed effectively.

DISCUSSION

Since the 1950's; Artificial Intelligence (AI) has been a repetitive theme in research work. Though this field recently gained a significant level of importance because of the advancement of technology and algorithms with new AI methods like machine learning, modern deep learning and natural processing of formless data. Although the nations are enthusiastic about joining the context of this new artificial intelligence and advantages of its possible assistance, its indistinct what implications AI will create on society.

This synthesis provides a summary of the 'state of play' of current understandings of the impact of AI technologies on work, reflecting a research discussion that has matured away from concentrating on eye-catching figures about potential job losses to a more nuanced discussion about the ways in which AI technologies might influence working lives. While there are many uncertainties surrounding the future of AI, it seems clear that major changes are underway and only just beginning. But on the other hand, research shows a diverse new of the impact of artificial intelligence in emerging and developed economies.

CONCLUSION

In conclusion, the impact of artificial intelligence (AI) on the developing workforce is multifaceted, presenting both challenges and opportunities. The increasing role of AI across various industries has transformative effects on the nature of works, job roles and the skills required in the workforce.

The evolution of automation, driven by AI technologies has the potential to enhance efficiency, productivity and innovation. However, it also raises concern about job development, particularly in routine and repetitive tasks as AI technologies continue to advance, there is notable creation of new job opportunities in AI related fields. Professions such as machine learning engineers, data scientists, are in demand, highlighting the importance of continuous learning and upskilling in adapting to the changing job market.

Looking ahead, anticipated developments in AI technology include further advancements in deep learning, increased focus on explainable AI and the integration of AI in edge computing. Ethical standards, international collaboration on regulations and the responsible use of AI will be paramount in shaping the future of work and ensuring

that AI technologies contribute positively to global progress, continued research, collaboration and adaptive policies are essential to navigate this dynamic landscape and promote sustainable economic growth and societal advancement.

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The Impact of Artificial Intelligence on Marketing and Manufacturing sectors in the Global Economy

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Abstract

In the domain of marketing, AI-driven technologies have fundamentally transformed customer engagement by facilitating personalized interactions at scale. Through the utilization of predictive analytics and natural language processing, AI empowers marketers to easily analyze consumer behavior, tailor offerings precisely, and optimize campaigns with unprecedented precision. Consequently, businesses can elevate customer satisfaction, boost sales figures, and cultivate brand loyalty in the competitive market.

Similarly, within the sectors, AI is restructuring operations minimizing risks, and enhancing decision-making capabilities. Technologies such as chat bots, predictive analysis, co-bots, inventory management, new product development process etc have been implemented in it. Furthermore, AI-help in making good decisions, idea generations and so.

In conclusion, the pervasive influence of AI on marketing and manufacturing sector holds significant implications for the global economy. Through responsible adoption of AI technologies, businesses and manufactures can harness its transformative potential to stimulate innovation, drive economic expansion, and pave the way for a more equitable and sustainable future.

This study employs quantitative research methods to ensure a clear understanding of AI's impact in both marketing and manufacturing sector domains.

Introduction

Artificial Intelligence (AI) has emerged as a transformative force that reshapes the global landscape of the marketing and manufacturing sectors. With advancements in machine learning, natural language processing, and data analytics, AI technologies have revolutionized how businesses engage with customers and manage financial transactions. In the marketing sector, AI identifies the requirements of the persons and provides them accordingly. This helps the marketing sector to predict consumer behavior and optimize advertising strategies for the current market situation. Through AI-driven chat bots and virtual assistants, companies can deliver tailored customer experiences, improve customer satisfaction, and drive sales conversion. Similarly, in the manufacturing sector, AI has played a crucial role, thereby reducing the human workforce and working in more effective and efficient ways. Various technologies have been implemented through the application of AI, including predictive maintenance, automation, inventory management, demand forecasting, and analysis. Therefore, understanding the implications of AI adoption in the marketing and manufacturing sectors is

essential for businesses to remain competitive in the current digital economy. Therefore, this study considers the impact of AI on the marketing and manufacturing sectors of the global economy.

METHODOLOGY

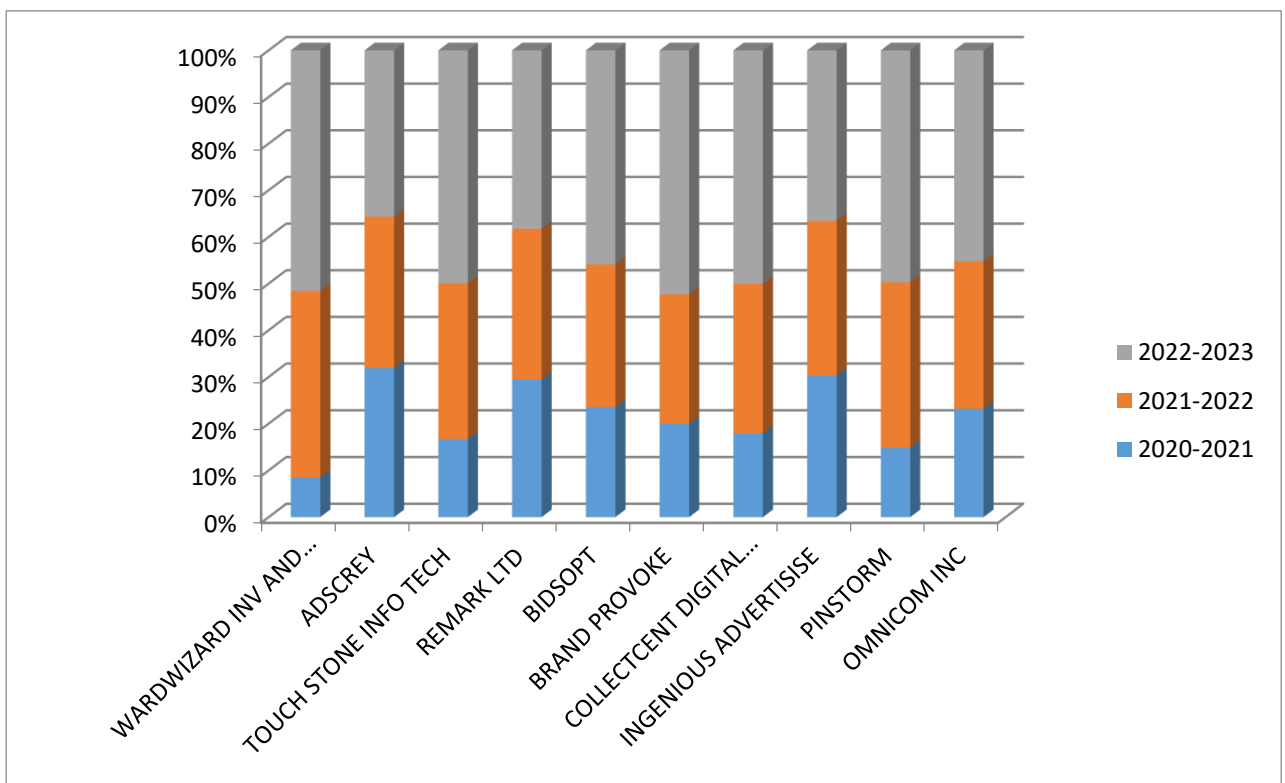
In our study, we applied a quantitative approach to investigate the consequences of artificial intelligence (AI) in the marketing and manufacturing industries. Our primary data source was financial statements, specifically examining profit levels before and after AI adoption. We used marketing analysis techniques to gather the necessary information for this study. In our analysis we analyze the top 10 companies in both the sectors who adopted this technology and contrasted the profit values of companies across different time periods in the global market, assessing the percentage changes in their profits over the course of the year and graphically depicting these findings for the marketing and manufacturing sectors.

FINDINGS

After conducting an analysis of the data from numerous manufacturing and marketing companies, it became evident that the implementation of artificial intelligence has a significant influence on both the global economy and the specific sectors in which they operate. The findings of this study illustrate the extent to which AI has a significant impact on various industries.

1.1 IMPACT OF ARTIFICIAL INTELLIGENCE IN THE MARKETING SERVICE MARKET

MARKETING SERVICE MARKET ANALYSIS

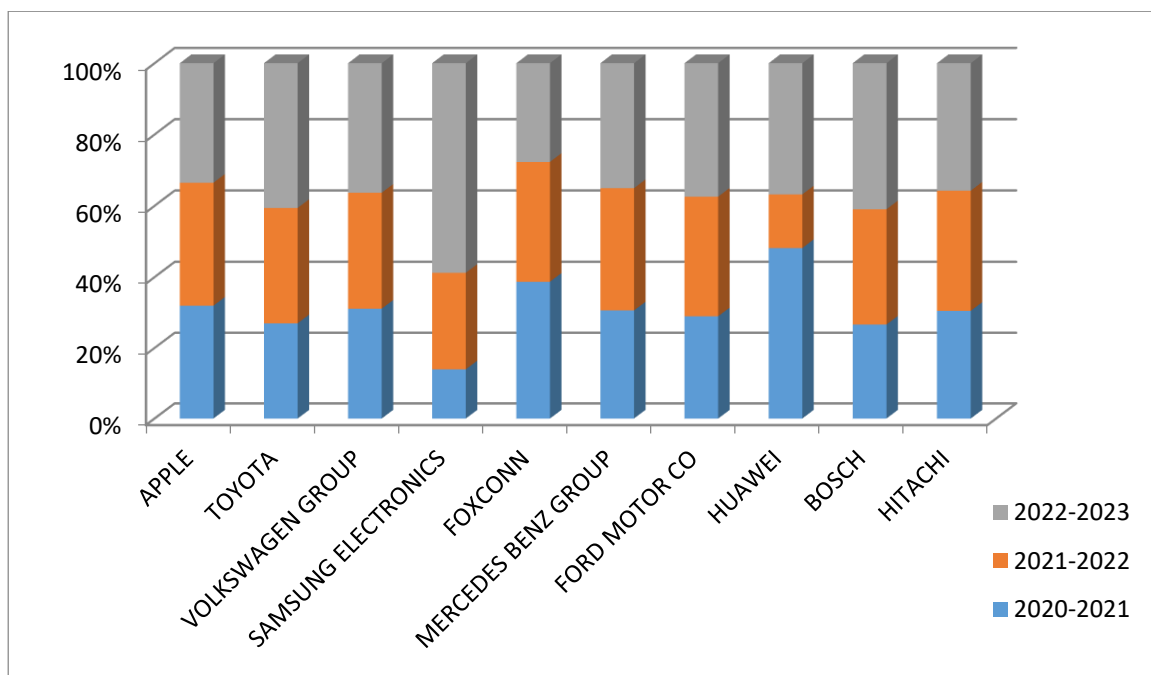


This graph represents the profitability of the top companies in marketing services in the global economy. The X-axis represents the companies working in this sector, and the Y-axis represents the increase in the percentage of change in the value of profit. While inspecting this graphical representation, we can identify a dramatic change in the value of profit that the company earned as compared to the previous years of their profitability. With the introduction of artificial intelligence (AI), companies change their plan of action according to technological advancements that help provide accurate insight into the customer journey and trends.

From the above, we conclude that the introduction of artificial intelligence has a great impact on the marketing sector in the economy, and it forgone to a great extent as well.

1.2 IMPACT OF ARTIFICIAL INTELLIGENCE IN THE MANUFACTURING SECTOR

MANUFACTURING SECTOR MARKET ANALYSIS



The graph represents the profitability of the manufacturing sector companies in the global economy. The X-axis represents the top manufacturing companies in the global economy, and the Y axis represents the percentage increase in the profitability of the companies.

While analyzing the graph, we can see various fluctuations in the profitability of the companies during the years. Recently, the introduction of Artificial Intelligence (AI), which leads to an increase in the profitability of various companies (as we can see in the graph), indicates the

adoption of this technology in the manufacturing sector, which benefits companies to make more profitability compared to before.

The main advancement in the manufacturing sector by the use of artificial intelligence is to predict and prevent machine failures, reduce expensive downtime in manufacturing, and even forecast the demand for the product, as well as reduce wastage of raw materials.

CONCLUSION AND FUTURE DIRECTIONS

This study provides valuable insights into the impact of artificial intelligence (AI) in the marketing and manufacturing sectors. From this research we can identify the reshaped marketing and manufacturing sectors across the globe, thereby identifies the various innovative technologies that they have implemented in there sectors as to increase the efficiency and productivity in there sectors as well. Innovative technologies include predictive analysis, personalization, chat bots, etc., which are some of the technologies that have been used in the marketing sector,while in the manufacturing sector, the technology includes AI in Supply chains, Co bots, inventory management, new product development, quality assurance, etc. are been used in this sector.Moreover, the adoption of Artificial Intelligence has had a great impact in both sectors as well, and the upcoming new technologies that are being implemented in this field also have a much greater impact on the global economy.In this study, we only discuss the marketing and manufacturing sectors, and the information is limited to that sector; therefore, we identify only that sector. There is much more to be considered to identify the total impact on Artificial Intelligence in all sectors; therefore, we must also consider other sectors in the market.

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Leveraging Artificial Intelligence in Modern Marketing

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ABSTRACT

The integration of artificial intelligence (AI) in modern marketing strategies has revolutionized the way businesses interact with consumers, analyze data, and tailor personalized experiences. This abstract presents a comprehensive framework for leveraging AI in contemporary marketing practices. Beginning with an overview of AI technologies, including machine learning, natural language processing, and predictive analytics, it explores their applications across various marketing domains such as customer segmentation, content optimization, predictive modeling, and customer relationship management. Moreover, it delves into the ethical considerations surrounding AI implementation in marketing, emphasizing the importance of transparency, privacy, and fairness. Additionally, the abstract discusses the challenges and opportunities associated with AI adoption, highlighting the need for continuous learning and adaptation in dynamic market environments. Ultimately, this framework serves as a guide for marketers seeking to harness the power of AI to enhance customer engagement, drive revenue growth, and gain a competitive edge in the digital age.

INTRODUCTION

Artificial Intelligence (AI) refers to the simulation of human intelligence processes by machines, particularly computer systems. These processes include learning (the acquisition of information and rules for using it), reasoning (using rules to reach approximate or definite conclusions), and self-correction.

In marketing, AI holds significant importance due to its ability to process vast amounts of data quickly, identify patterns, and make predictions or recommendations based on that data. Some key aspects of AI's significance in marketing include:

- 1. Personalization:** AI enables marketers to create highly personalized experiences for consumers by analyzing their behavior, preferences, and demographics. This leads to more targeted advertising, product recommendations, and content customization, ultimately improving customer engagement and satisfaction.
- 2. Data Analysis:** With AI-powered analytics tools, marketers can extract valuable insights from large datasets in real-time. This helps in understanding consumer trends, identifying

market opportunities, and making data-driven decisions to optimize marketing campaigns and strategies.

3. **Automation:** AI automates repetitive tasks such as email marketing, social media posting, and customer support, freeing up time for marketers to focus on more strategic initiatives. This leads to increased efficiency, reduced operational costs, and improved productivity.

4. **Predictive Modeling:** AI algorithms can forecast future trends and outcomes based on historical data, enabling marketers to anticipate customer needs, forecast sales, and optimize inventory management. This proactive approach enhances competitiveness and enables companies to stay ahead of market changes.

5. **Customer Engagement:** Through chat bots, virtual assistants, and voice-enabled devices, AI facilitates seamless communication between brands and consumers, providing instant support and personalized assistance. This enhances the overall customer experience and fosters long-term relationships with customers.

In essence, AI empowers marketers to create more relevant, timely, and personalized experiences for consumers, driving higher engagement, loyalty, and revenue growth in an increasingly competitive marketplace.

Key Words: Personalization, Data Analysis, Automation, Chat Bots, Predictive Analysis, Targeted Advertising, Hyper-Personalization, Emerging Trends.

OBJECTIVES

1. **Identifying Key Applications:** Explore the various ways AI is being utilized in modern marketing campaigns and strategies.
2. **Analyzing Challenges and Barriers:** Identify the challenges, limitations, and barriers faced by marketers when implementing AI technologies in their campaigns.
3. **Exploring Ethical Implications:** Investigate the ethical considerations and implications of using AI in marketing, such as privacy concerns, algorithmic bias, and transparency issues.
4. **Forecasting Future Trends:** Predict future trends and developments in AI-driven marketing technologies and strategies, and their potential impact on the industry.
5. **Providing Recommendations:** Offer practical recommendations and guidelines for marketers looking to integrate AI into their marketing strategies effectively.

IMPORTANCE

Artificial Intelligence (AI) has become increasingly important in marketing due to its ability to analyze vast amounts of data, personalize customer experiences, automate tasks, and optimize campaigns. Here are some key reasons why AI is crucial in modern marketing:

- 1. Data Analysis and Insights:** AI algorithms can quickly analyze large datasets to identify patterns, trends, and correlations that humans might overlook. This data-driven approach enables marketers to make informed decisions and develop more effective strategies.
- 2. Personalization:** AI enables marketers to create highly personalized experiences for customers by analyzing their behavior, preferences, and past interactions. This personalization enhances customer engagement, increases satisfaction, and drives conversions.
- 3. Predictive Analytics:** AI-powered predictive analytics can forecast future trends and customer behavior based on historical data. Marketers can use these insights to anticipate customer needs, optimize pricing strategies, and allocate resources more effectively.
- 4. Customer Segmentation:** AI algorithms can segment customers into distinct groups based on various criteria such as demographics, behavior, and preferences. This segmentation allows marketers to target specific audiences with relevant messages and offers, improving the effectiveness of marketing campaigns.
- 5. Content Creation and Optimization:** AI tools can generate and optimize content at scale, including articles, ads, and product descriptions. Natural Language Processing (NLP) algorithms analyze language patterns to create compelling and relevant content that resonates with target audiences.
- 6. Chatbots and Virtual Assistants:** AI-powered chat bots and virtual assistants can provide personalized assistance to customers in real-time, answering questions, resolving issues, and guiding them through the sales funnel. These automated systems enhance customer support and streamline the buying process.
- 7. Marketing Automation:** AI enables the automation of repetitive tasks such as email marketing, social media posting, and ad targeting. By automating these processes, marketers can save time, improve efficiency, and focus on more strategic initiatives.
- 8. Optimized Advertising Campaigns:** AI algorithms can optimize advertising campaigns by analyzing performance data in real-time and adjusting targeting, bidding, and creative elements accordingly. This optimization maximizes ROI and improves the effectiveness of digital advertising efforts.
- 9. Customer Insights and Feedback Analysis:** AI can analyze customer feedback from various sources such as social media, reviews, and surveys to extract valuable insights. Marketers can use these insights to understand customer sentiment, identify areas for improvement, and refine their marketing strategies.
- 10. Competitive Advantage:** Businesses that leverage AI in marketing gain a competitive advantage by staying ahead of trends, delivering personalized experiences, and optimizing

campaigns for maximum impact. As AI continues to evolve, its importance in marketing will only increase, shaping the future of customer engagement and brand interactions.

CHALLENGES AND ETHICAL CONSIDERATIONS

AI predicts consumer behavior by analyzing vast amounts of data, including past purchase history, online behavior, social media interactions, demographic information, and more. Machine learning algorithms then identify patterns and correlations within this data to forecast future consumer actions, such as purchasing decisions, preferences, and trends.

1. **Data Privacy:** AI in marketing relies heavily on collecting and analyzing large volumes of consumer data. This raises concerns about data privacy and the protection of personal information. Companies must ensure compliance with regulations such as GDPR (General Data Protection Regulation) and CCPA (California Consumer Privacy Act) to safeguard consumer privacy rights.

2. **Algorithmic Bias:** AI algorithms can perpetuate or even exacerbate biases present in the data they are trained on. This can lead to discriminatory outcomes in marketing campaigns, such as targeting certain demographics unfairly or reinforcing stereotypes. Addressing algorithmic bias requires careful data curation, algorithm transparency, and ongoing monitoring to mitigate unintended consequences.

3. **Transparency and Explainability:** AI-driven marketing models can be complex and opaque, making it difficult for consumers to understand how their data is being used to target them. There is a need for transparency and explainability in AI systems to build trust with consumers and ensure accountability. Companies should strive to provide clear explanations of how AI algorithms work and how they influence marketing decisions.

4. **Consent and Control:** Consumers may feel uncomfortable or even violated if they perceive that their personal data is being used without their consent or control. It's crucial for companies to obtain explicit consent from consumers for data collection and usage purposes. Moreover, providing consumers with control over their data, such as the ability to opt-out of certain data collection practices or customize their privacy settings, is essential for respecting individual autonomy.

5. **Security Risks:** The use of AI in marketing introduces new security risks, as cybercriminals may exploit vulnerabilities in AI systems to access sensitive consumer data or manipulate marketing campaigns. Companies must prioritize cyber security measures, such as encryption, authentication, and intrusion detection, to protect against data breaches and unauthorized access.

6. **Job Displacement and Economic Impacts:** The automation of marketing tasks through AI may lead to job displacement for human workers in the industry. This raises concerns about unemployment and economic inequality. Companies implementing AI in marketing should

consider the potential impact on employees and invest in reskilling and upskilling initiatives to ensure a smooth transition to AI-driven processes.

EMERGING TRENDS IN AI AND MARKETING

1. **Hyper-Personalization:** AI enables marketers to create highly tailored and personalized experiences for individual consumers based on their preferences, behaviors, and context. This trend will continue to evolve, with AI-driven algorithms delivering content, product recommendations, and advertisements that are precisely tailored to each consumer's needs and interests.

2. **Conversational Marketing:** Conversational AI technologies, such as chat bots and virtual assistants, are becoming integral to marketing strategies. These AI-powered tools enable brands to engage with consumers in real-time conversations, providing personalized recommendations, answering queries, and facilitating transactions. As Natural Language Processing (NLP) capabilities improve, conversational marketing will become more seamless and intuitive.

3. **Predictive Analytics:** AI-powered predictive analytics tools leverage machine learning algorithms to forecast future trends and consumer behavior with greater accuracy. By analyzing historical data and identifying patterns, predictive analytics can help marketers anticipate market shifts, optimize marketing campaigns, and identify opportunities for growth.

4. **Augmented Reality (AR) and Virtual Reality (VR):** AR and VR technologies are transforming the way consumers interact with brands and products. AI-driven algorithms enhance AR/VR experiences by personalizing content, recommending relevant products, and adapting virtual environments based on user preferences. Marketers will increasingly leverage AR and VR to create immersive brand experiences that drive engagement and conversion.

5. **Voice Search Optimization:** The rise of voice-activated devices and virtual assistants, such as Amazon Alexa and Google Assistant, is reshaping search behavior. Marketers are adapting their strategies to optimize content for voice search queries, leveraging AI to understand natural language and contextually deliver relevant information to users.

6. **AI-Generated Content:** AI technologies, including Natural Language Generation (NLG) and Generative Adversarial Networks (GANs) are capable of generating content, such as articles, ads, and product descriptions, autonomously. Marketers can use AI-generated content to scale their content creation efforts, personalize messaging, and streamline content production workflows.

7. **Ethical AI and Transparency:** As concerns about algorithmic bias and data privacy grow, there will be a greater emphasis on ethical AI practices and transparency in marketing. Companies will invest in tools and processes to ensure fairness, accountability, and compliance with regulatory requirements, enhancing trust and credibility with consumers.

CONCLUSION

The transformative impact of AI on marketing cannot be overstated. From hyper-personalization and predictive analytics to conversational marketing and AI-generated content, AI is revolutionizing how brands engage with consumers, driving efficiency, and enhancing the customer experience.

As AI continues to evolve, staying informed and adaptable is crucial for marketers to remain competitive in an ever-changing landscape. By embracing emerging trends and technologies, marketers can unlock new opportunities to reach and connect with consumers in more meaningful and effective ways.

However, it's important to approach AI implementation in marketing thoughtfully and ethically, addressing challenges such as data privacy, algorithmic bias, and security risks. By prioritizing transparency, fairness, and consumer trust, marketers can harness the power of AI responsibly while respecting individual rights and preferences.

In this dynamic environment, continuous learning and innovation is the key. Marketers who stay abreast of AI developments, experiment with new strategies, and adapt to shifting consumer behaviors will be best positioned to succeed in the AI-driven future of marketing. Ultimately, by leveraging AI effectively and responsibly, marketers can drive business growth, foster customer loyalty, and shape the future of marketing in a rapidly evolving digital landscape.

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Artificial Intelligence and Intellectual Property Rights

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Abstract

Intellectual Property Rights(IPR) is a collective term applied to a number of different types of legal rights granted by a country to the holders of intellectual properties.IPR provides certain exclusive rights to the inventors or creators of that property in order to enable them to reap commercial benefits from their creative efforts .There are several types of intellectual property protection like trademark, patent, copyright, etc.IPR is prerequisite for better identification , planning, and protection of invention or creativity. Each industry should evolve its own IPR policies. Artificial Intelligence (AI) is intelligence exhibited by machines, particularly computer system, as opposed to the natural intelligence of living beings. It is a field of research in computer science that develops and studies methods and software which enable machines to perceive their environment and uses learning and intelligence to take actions that maximize their chances of achieving defined goals. Such machines may be called Artificial Intelligence (AI).

Introduction

Intellectual Property Rights (IPR) refers to the legal rights given to the inventor or creator to protect his invention or creation for a certain period of time. The origin of international IP regime was the Paris Convention for the protection of industrial property and inventions in 1883.Trademark is a distinct symbol, logo, word, or multiple words that are legally registered or established through their use as representing a company or product brand. A trademark protects brand names and logos used on goods and services. Trademarks are intellectual property rights that are protected by law. Patent is a recognition for an invention, which satisfies the criteria of global novelty, non-obviousness, and industrial application. A patent gives you the right to stop others from copying, manufacturing, selling or importing your invention without your permission. To get a patent technical information about the invention must be disclosed to the public in a patent application.

Artificial Intelligence is the simulation of human intelligence processes by machines, especially computer systems. John Mc Carthy is considered as the father of Artificial Intelligence. John Mc Carthy was an American computer scientist.AI makes it possible for machines to learn from experience adjust to new inputs and perform human like tasks. Using technologies computers can be trained to accomplish specific tasks by processing large amounts of data and recognizing patterns in the data.

Keywords: Intellectual property, trademark, patents, artificial intelligence.

Objectives

- IPR aims to protect the creations and innovations of individuals.
- By providing legal protection IPR encourage innovation and creativity by rewarding creators and inventors for their efforts.

- IPR contribute to economic growth by fostering competition, attracting investments, and facilitating trade.
- AI aims to solve problems and decisions efficiently is invaluable across various industries.
- AI-driven natural language processing is a critical aspect of creating machines that can understand and communicate with humans in natural language.
- Machine learning and deep learning are subset of AI that focus on enabling machines to learn from data without explicit programming.
- Integrating AI with robotics has given rise to intelligent machines that can perform physical tasks with accuracy.
- Medical professionals can leverage AI algorithms to analyze medical images, predict disease outcomes and develop personalized treatment plans for patients.
- AI powered tools can assist artists, writers, and designers generate creative new ideas.

Why we need IPR?

According to Prafulla Ganguly, "Intellectual Property Right is needed because the need to 'ad(vent)ure' with knowledge is these days being felt more than ever before". Hence, it is the need of realistic legal frameworks that would nurture innovation, and provide for ownership of knowledge, facilitate fearless knowledge sharing, transfer, encourage fair benefit distribution between the innovators and society resulting in enhanced trade and societal advancement.

Intellectual Property (IPR)

Intellectual Property (IP) refers to creations of the mind such as inventions, literary and artistic works, designs, and symbols, name and images used in commerce. Property created by human intellect is known as intellectual property. The intellectual property is the outcome of an invention based on information, reasoning and experiments with tangible objects. Once created it can be multiplied by any number of times and anywhere in the world by using the same or similar process. The inventor naturally should have some rights as a reward for his efforts in inventing the property. Intellectual property rights is a collective term applied to a number of different types of legal rights granted by a country to the holders of intellectual properties. Intellectual property is usually divided into two categories:

Industrial property which includes trademarks, patents, industrial designs and geographic indications of source.

Copyright which covers rights over literary and artistic works.

Trademark

Trademark in India are governed by the Trademark Act, 1999. A trademark is a recognizable sign, design or expression which identifies products or service of a particular source from those of others. It is a brand or a part of a brand that is given legal protection, because it is capable of exclusive appropriation. A trademark owner can be individual, business organization or any legal entity. It may be marked on a package, a label, a voucher or on the product itself. For the sake of corporate identity, trademarks are often displayed on company buildings. According to Trademark Act, 1999 "Trademark is a mark capable of being represented graphically and

which is capable of distinguishing the goods or services of one person from those of others and may include shape of goods, their packaging and combination of colours”.

A mark to be registered must observe some legal formalities as under:

- It must not be identical with or confusingly similar to marks already in the same field.
- It should be one which the public can use to recognize the goods.
- It must not possess the flag of a nation.
- The brand or mark must be associated by the public with a definite source of supply.
- The word or term or slogan registered can be used exclusively for the identification of the owner’s goods.

Procedure for registration of a trademark

1. Trademark search: It is conducted from the trademark database which will reveal all information about any identical trademark that has already been filed with the trademark authority.
2. Filing of trademark: An application for the registration of the trademark is to be filed before the Registrar of Trademark. It should be filed at the Head Office or Branch Office of the Trademark Registry Office corresponding to the place where the applicant carries on his business. An application shall contain the following mandatory details:
 - Logo/mark
 - Name and address of the owner
 - Classification of trademark class
 - Date since which the logo or mark is used
 - Description of goods and services
3. Examination: The mark to be registered is to be examined by the trademark authority of India as to whether it is capable of being distinguished from already existing similar marks.
4. Journal publication: The registrar decides whether the application should be accepted to registration or not. If the application is accepted for registration, he publishes it in the trademark journal.
5. Trademark registration: If there is no oppositions within four months from the date of publishing in the trademark journal the trademark registration certificate will be issued.
6. Payment of fee: The final step include payment of fees by the applicant for the relevant trademark registration. The present fees for the application of the trademark is Rs.4000. The fees for expediting the examination of a mark is Rs.20,000 at present.

Patent

A patent is a legal instrument granted by the government, that gives exclusive rights to an inventor to use such rights for a limited period of time, in exchange of detailed public disclosure of an invention. It is a form of intellectual property which provides legal protection for an invention. An invention may be a product a process or a combination of both. A patent

once granted for an invention is an intellectual property which remains in force for a specific period of time. If any person uses or exploits it without proper authorization of the owner of the patent, it is an illegal act. Conditions to be fulfilled for an invention to be patented:

1. It must have novelty: To get patented, the information should not already be in the possession of somebody else and it must be a new product or process.
2. It should be inventive: The invention must be non-obvious to a person who possesses average skills in the art.
3. It should be useful: The invention can be patented only if it is useful and legally permitted one.
4. Commercial application: It should be capable of industrial application. An invention to be granted patent is that it should involve technical advancement as compared to the existing knowledge or have economic significance or both.

Artificial Intelligence (AI)

Artificial Intelligence (AI) is technology that enables computers and machines to simulate human intelligence and problem solving capabilities. On its own or combined with other technologies (eg. sensors, robotics) AI can perform tasks that would otherwise require human intelligence or intervention. Digital assistants, GPS guidance, autonomous vehicles and generative AI tools(like open AI chat GPT) are just a few examples of AI in our daily lives. As a field of computer science, artificial intelligence encompasses machine learning and deep learning. These disciplines involve the development of AI algorithms, modeled after the decision making processes of the human brain that can learn from available data and make increasingly more accurate classifications or predictions over time.

Machine learning and deep learning are sub disciplines of AI and deep learning learning is a sub discipline of machine learning. Both the machine learning and deep learning use neural networks to learn from huge amount of data. These neural networks are programmatic structures modeled after the decision making processes of the human brain. They consist of layers of interconnected nodes that extract features from the data and make predictions about what the data represents. Deep learning use deep neural networks composed of an input layer, three or more of hidden layers and an output layout. These multiple layers enable unsupervised learning ,they automate extraction of features from large ,unlabeled and unstructured data sets. Because it doesn't require human intervention, deep learning essentially enables machine learning at scale.

Artificial Intelligence (AI) and Intellectual Property Right (IPR)

Existing IPR regime well-equipped to protect AI generated works, no need to create a separate category of rights. IPR including copyright and related rights provide exclusive rights to the right owner who are legal persons for a set duration. Artificial Intelligence has brought remarkable advancement in the legal realm specifically in Intellectual Property. Along with this it also introduced various challenges such as ownership and copyright. The fundamental goal of the IP system is to encourage innovation through new technologies and creative works. This includes human created as well as AI created, inventions and works. AI also provides a general use technology to assist in the application, management and administration of IP systems and tools.

Impact of AI on IPR

The use of Artificial Intelligence has severely changed the format of how people work. Similarly, its use in intellectual property has become increasingly prevalent. One of the most important applications of AI in IP is the creation of new work as it can generate original work. AI focuses on performing tasks with the help of intelligence methods such as reasoning, problem solving, machine learning. With the help of AI powered comprehensive searches of existing IP databases can be performed more efficiently and accurately. Along with this it also helps in analyzing technical information and documents to determine existing relevant work to prevent copyrights infringement. As AI technology becomes more advanced, it will likely be used more in areas related to intellectual property. This could lead to new legal issues and problems.

Ownership and Authorship

One of the most important legal challenges posed by Artificial Intelligence on IP is the issue of ownership and authorship of AI-generated works. One can generate original work with a high level of creativity with the help of AI but the question arises "Who owns that work?" one who gives directions to the AI system to create the work(user)the developer of the AI system or the AI system itself. According to the traditional intellectual property law, the creator or author of the work is considered the sole owner of the work but this is not the case with the AI-generated art.

Conclusion

There is no iota of doubt that AI can for sure prove to be an asset in the field of Intellectual Property Rights to certain extent like it can do many inventions which might take any human ages to do and can help advancement of the nations but then there are so many lacunas and ambiguity regarding using AI in IPR but then AI can also prove to be a threat as there are issues of determining the liability in case of infringement. There is a need of policies and rules pertaining to AI and how will the liability be determined. Also a clarity is need on who will hold the copyright, patent or any other intellectual property right over the work or invention of AI.

Hence AI is still at a very initial stage and a lot of growth is happening and there will be no end to the debate on impact of AI be it on any sector or specifically on Intellectual Property Rights till the time there are laid out rules on the use of AI, it's liability and to what extent AI can be allowed to interfere. A roadmap for AI, its functioning, control and liability is the need of the hour keeping in mind the pace with which AI is growing at present. In a nutshell AI is very beneficial if it is within the control of the programmer but the moment it starts functioning on its own without any external control it might pose as a threat to not only the field of Intellectual Property Rights but to every one in general.

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ARTIFICIAL INTELLIGENCE IN COMMERCE AND MANAGEMENT

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Abstract

AI (artificial intelligence) is one of our most recent inventions. AI is capable of performing tasks that typically require the intelligence of a human being. It is capable of performing tasks like reasoning, learning, problem solving, and decision-making, and sometimes it may be more efficient than its makers in performing these tasks. AI in e-commerce is being used by retailers and service providers to create chatbot services and analyze the buying behaviour of customers to provide them with personalised ads. AI can help customers by giving them recommendations on products and services and making their shopping experiences smooth. AI has several important uses in the e-commerce industry and management process.

Introduction

AI is the abbreviation for artificial intelligence. Artificial intelligence is a complex programme that is able to perform functions and tasks that were historically considered only possible to be done by human beings. AI is capable of thinking and working like a human. AI uses algorithms and models to identify patterns, and from those patterns, it learns and can be used to generate answers, make predictions, and solve problems. AI can run through the data processing and test its own performance to make improvements. AI has recently seen a huge advancement; it is now used by almost everyone in this world. AI is available on mobile phones, electric cars, gadgets, television, and even on cameras used by governments.

Examples of AI

- Siri on iPhones
- Gemini by Google
- Chat GPT by Open ai
- Chatbots
- Spam bot

Types of AI

- Reactive Machines: The first artificial intelligence systems were called reactive machines, which had no memory base and very little technology.
- Limited Memory: The next type of AI in its evolution is limited memory. This algorithm learns from more data as it is fed, mimicking the synaptic connections between neurons in the brain. Image recognition, deep learning, and other forms of reinforcement learning are all enhanced by deep learning algorithms.
- Theory of mind: Reactive machines and limited memory are the first two forms of artificial intelligence that are currently in use. Future theoretical types that could be

developed include self-aware AI and theories of mind. There aren't any real-world examples yet.

- **Self-Awareness:** The final evolution of AI is one that has self-awareness, is conscious, and understands its existence like a fully functioning human being.

Objective:

To understand the impact of AI in commerce and management.

AI in Commerce

Many online trading platforms use AI to help their customers find what they require by giving them suggestions after understanding their buying behavior and interactions with products on the World Wide Web (WWW.). They can help businesses maintain a good relationship with customers by providing them with 24/7 virtual assistants and chatbots. Artificial intelligence (AI) is the driving force behind Amazon's product recommendation system. Online retailers use artificial intelligence in the e-commerce space not only for product recommendations but also for chatbot services, customer comment analysis, and offering tailored services to customers. One in five consumers will purchase goods or services from a chatbot, according to a recent survey, and 40% of online shoppers use chatbots to find amazing discounts and offers. Similarly, many other online shopping platforms use AI for the same purpose. AI is proving to rack up a lot of profit for these e-commerce platforms with predictions and suggestions.

AI also helps e-commerce platforms identify fraudulent activities. Fake reviews of any product can be identified, removed, or barred from the site. AI can also take on after-sales activities like talking to clients who want to address certain issues that they are facing regarding any product or service. This AI chatbot can talk to clients like a normal human being and give them an immediate solution to their problem.

Zomato and Swiggy have a virtual assistant who we can talk to to address our problems, and it will try to provide us with a feasible solution. Although these assistants do not reply like proper human beings, they are capable of making decisions that might help the customer in some way. AI chatbots and assistants have a customer-centric approach and are only concerned with customer satisfaction. These are some ways in which AI influences commerce.

AI in Management

"Management is the art of knowing what is to be done and selling it in the best possible manner." - F.W. Taylor. Management is the sum of planning, organising, directing, and controlling the resources in an organization to achieve the goals set by the upper-level managers in the organisation.

AI in management has several uses. It can help an organization manage its resources in a much more efficient manner by helping the managers make quicker decisions. With the help of AI, the organization will be able to make an analysis of its functioning and make changes according to the reports generated.

Some of the uses of AI in management are:

- Automating Tasks: Repetitive tasks can be automated with AI. Tasks like data entry, scheduling meetings, and the generation of reports.
- Making decisions and analyzing data: AI is capable of analyzing enormous volumes of data to spot patterns and trends that are hard for humans to notice. From the analysed data, managers can make decisions regarding staffing, marketing, and sales.
- Risk management: AI can be used to predict the risks that may arise due to the uncertainties faced by the organization and take proper steps to overcome or avoid those risks.
- Workforce management: AI can be used to analyze the skills and skills gaps of the workforce and suggest training programmes if needed.

REVIEW OF LITERATURE

A.A. Nimbalkar and A.T. Berad (2021) Artificial intelligence (AI) is a wide-ranging part of computer science concerned about building smart machines equipped for performing tasks that normally require human intelligence. Aside from product recommendations, artificial intelligence in e-commerce industry is being used by online retailers for providing chatbot services, analyzing customer comments, and providing personalized services to online shoppers. The key applications of AI in e-commerce are use of chatbots or virtual assistants, intelligent product recommendations, personalization and inventory management. Summarily, AI has several important uses in e-commerce and retailers are investing heavily in technology to stay competitive and relevant.

Mr. Ambar Srivastava (2021) We are living in an era that is full of technologies. Gone were the days when everything can only be done manually. Now technologies have a major role to play in our daily life. One of the technologies is Artificial Intelligence (AI). It becomes part of everyday life and changing the working style of people. Sometimes we even do not know that we are using AI. It can be seen in the form of home automation devices, self-driven cars, applications in smartphones, wearable devices, etc. It transforms everything it is part of. AI is the most progressive technology that the world is witnessing today. In the same way, the E-commerce industry has transformed the way business is done in India. India is the fastest-growing E-commerce market and it is expected to grow at a much higher pace in the coming years. One can see the application of AI in Ecommerce as well. AI is playing a crucial role in the E-commerce industry. The Ecommerce industry is moving towards a major technological change in the form of AI. The application of AI in the E-commerce industry is increasing drastically in the last decade. The E-commerce industry is using AI to process a large database of progressive customers, communicate with them using chatbots, helps in searching, sorting, and finding a relevant product. AI makes it possible to capture, process, and infer data on a large scale, and it is more efficient and accurate. E-commerce competitors are using AI to create

a customer-centric search, retarget potential customers, create a more efficient sales process, voicepowered search, improve recommendations for customers, tackle fake reviews, etc. The proposed paper will shed light on how AI is being applied in the Ecommerce industry and the impact of AI on E-commerce portals.

Dario Gil, Stacy Hobson, Aleksandra Mojsilović, Ruchir Puri & John R. Smith (2019) Artificial Intelligence (AI) offers great promise in supporting business operations. In this chapter, Dario Gil and co-authors provide a general introduction of AI and its applications to management. They describe how recent advancements in the field are enabling their use in supporting managerial tasks and functions such as strategy planning, marketing, and customer support. They also discuss some key considerations for business leaders interested in leveraging AI to improve business performance.

K A H Kobbacy, S Vadera & M H Rasmy The last decade has seen a considerable growth in the use of Artificial Intelligence (AI) for operations management with the aim of finding solutions to problems that are increasing in complexity and scale. This paper begins by setting the context for the survey through a historical perspective of OR and AI. An extensive survey of applications of AI techniques for operations management, covering a total of over 1200 papers published from 1995 to 2004 is then presented. The survey utilizes Elsevier's ScienceDirect database as a source. Hence, the survey may not cover all the relevant journals but includes a sufficiently wide range of publications to make it representative of the research in the field. The papers are categorized into four areas of operations management: (a) design, (b) scheduling, (c) process planning and control and (d) quality, maintenance and fault diagnosis. Each of the four areas is categorized in terms of the AI techniques used: genetic algorithms, case-based reasoning, knowledge-based systems, fuzzy logic and hybrid techniques. The trends over the last decade are identified, discussed with respect to expected trends and directions for future work suggested.

Laith T.Krais (2020) The advent and incorporation of technology in businesses have reformed operations across industries. Notably, major technical shifts in e-commerce aim to influence customer behavior in favor of some products and brands. Artificial intelligence (AI) comes on board as an essential innovative tool for personalization and customizing products to meet specific demands. This research finds that, despite the contribution of AI systems in e-commerce, its ethical soundness is a contentious issue, especially regarding the concept of explainability. The study adopted the use of word cloud analysis, voyance analysis, and concordance analysis to gain a detailed understanding of the idea of explainability as has been utilized by researchers in the context of AI. Motivated by a corpus analysis, this research lays the groundwork for a uniform front, thus contributing to a scientific breakthrough that seeks to formulate Explainable Artificial Intelligence (XAI) models. XAI is a machine learning field that inspects and tries to understand the models and steps involved in how the black box decisions of AI systems are made; it provides insights into the decision points, variables, and

data used to make a recommendation. This study suggested that, to deploy explainable XAI systems, ML models should be improved, making them interpretable and comprehensible.

Conclusion

AI has seen rapid advancements in the last few years. AI will continue to improve in the coming years, and we are just seeing the tip of the iceberg currently. More advancements in this field will help AI process information in a way that seems strangely similar to the way humans process information. But AI will be able to process this information quickly and give much better answers than tier creators. Gemini, Siri, and ChatGPT will become more advanced, and we will learn to use these AI assistants as our own personal assistants. Commerce and management will see drastic changes as AI advances. They will be able to predict the buying behavior of their clients much more accurately and give them suggestions that are tailored to specific clients. Virtual assistants will become more human-like, and clients won't be able to distinguish them from their real employees. Since the age of AI has begun, it will play a big part in management and commerce in the years to come.

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