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CHATGPT AND THE FUTURE WORLD: ANALYSIS CHATGPT BENEFITS AND SECURITIES

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ABSTRACT

ChatGPT is a powerful and complex natural language processing (NLP) system that can produce text that sounds like human speech in a variety of situations. It has been widely used in various fields, such as medicine, education, finance, and so on. This paper will provide an overview of ChatGPT's benefits, and securities. It will also provide a general overview of the various security threats that still exist in low- and middle-income countries, including the generation of malicious text and code, the exposure of personal information, scam services, information collection, and the creation of immoral material.

INTRODUCTION

The inventive advancement of intelligent technology is entering a new historical stage thanks to the next generation of artificial intelligence represented by Chat GPT (Generative Pretrained Transformer). This technology is fundamentally transforming society and mankind itself, as well as substantially affecting and shaping the production, living, and communication patterns of the entire society (Hill-Yardin et al., 2023). ChatGPT is a language generation model that may be

applied to a range of tasks, including text production, language translation, and natural language processing (Biswas, 2023). The goal of artificial intelligence (AI), a rapidly expanding area of computer science, is to build intelligent machines that can think and behave like people. AI has been employed in many fields, including autonomous vehicles and medical diagnosis.

Additionally, AI can be combined with the Internet of Things (IoT), another cutting-edge technology, to create a brand-new hybrid technology called AIoT (artificial intelligence of things). ChatGPT, a natural language processing (NLP) system that can produce human-like conversations, is one of the most promising AI technologies (Deng & Lin, 2023). Chatbots which are powered by artificial intelligence-generated content (AIGC) technologies have been evolving and developing ever since Eliza first appeared. The introduction of chatbots like Microsoft Xiaoice and Google Siri, as well as the ongoing development of technologies like Chat GPT, signal the beginning of this development process' historical stage of spiraling upward (Rahaman et al., 2023). Based on the InstructGPT, ChatGPT is an intelligent chatbot created by OpenAI that can follow instructions in a prompt and respond in depth. The official statement claims that because of the discussion style, ChatGPT is able to respond to follow-up inquiries, acknowledge mistakes, contest false premises, and reject inappropriate requests (Tencent et al., 2023). Future developments in technology may alter the appearance of chatbots or how people communicate in order to enhance user experience. The main characteristic of Chat GPT and other products that are comparable to it is that they have established content production criteria. These products can all be referred to as AIGC products. These products are deeply ingrained in people's daily lives and are capable of forging strong bonds with each user, dramatically impacting people's behavioral patterns and inspiring ongoing innovation in learning strategies (Jend, 2023).

The Generative Pretrained Transformer (GPT) was released in late November 2022, sparking a frenzy. Sam Altman, the CEO of OpenAI, reported that more than a million users had signed up for GPT within a week. ChatGPT is based on a large language model (LLM) that was trained on a sizable amount of digitized data and expands upon its predecessor, GPT3.5. The most recent iteration of LLM, GPT, is trained on 175 billion parameters to produce writing that remarkably matches text produced by humans. GPT is built on a pre-trained language model that recognizes human queries rapidly and produces input text that appears to be legitimate (Gilson et al., 2023; Tajik, 2023). The company OpenAI just made the ChatGPT technology open to the general

audience. It is a chatbot, or chat robot, that searches for information and combines it to generate responses to questions that are framed in normal language and are based on previously registered answers in a database. Examples of text compositions based on an author's writing style are well known. Other examples include the ability to edit and write computer code as well as the development of texts and essays on diverse subjects. It is unexpected how information is processed and combined to provide an answer to a posed question, and this has sparked discussions regarding the potential applications and current capabilities of artificial intelligence systems. A notable advancement in the public's awareness of artificial intelligence and its possible uses is the release of ChatGPT (Cardoso, 2023).

The future of ChatGPT appears to be most promising when integrated with other artificial intelligence technologies, like computer vision and robotics. By combining the language capabilities of ChatGPT with the visual and physical capabilities of computer vision and robotics, humans may create intelligent and conversational AI systems that can revolutionize the way people interact with technology. The most exciting feature of ChatGPT is its capacity to customize itself to each user by observing their behaviors and preferences. ChatGPT can eventually respond with better, more pertinent information by getting to know the user's language, tone, and style over time. A higher level of personalization can also result in better customer service and education since ChatGPT can be trained to understand and cater to the specific needs and preferences of each user (Mijwi et al., 2023). Additionally, programmers can create language models that are precisely tailored to the preferences and demands of each user, creating a more unique and interesting experience. The most exciting feature of ChatGPT is its capacity to customize itself to each user by observing their behaviors and preferences. ChatGPT can eventually respond with better, more pertinent information by getting to know the user's language, tone, and style over time. A higher level of personalization can also result in better customer service and education since ChatGPT can be trained to understand and cater to the specific needs and preferences of each user. Additionally, programmers can create language models that are precisely tailored to the preferences and demands of each user, creating a more unique and interesting experience (Aljanabi, 2023). This paper will provide an overview of ChatGPT's benefits, and securities.

METHODOLOGY

The researcher did not directly gather primary data for this study through fieldwork; instead, a literature review methodology is used. To ensure the successful completion of the investigation, the researcher used a variety of reference materials. Using keywords linked to the issues mentioned, namely ChatGPT and its benefit and securities, the literature for this study was found in digital media and scientific repositories. The authors' methodology was adaptable, allowing for the choice of pertinent reference materials without placing limitations on certain publications or digital platforms. The focus of the researcher's analysis was on scholarly journals, writings, and other works that were released in 2023. We employed keywords to carry out searches across several publication platforms during the search procedure. It is crucial to understand that, while some papers, journals, and publications were declared irrelevant, others were thought to be highly pertinent to the topic of ChatGPT and its benefits and future world security. The process yielded 15 relevant papers that were included in this study.

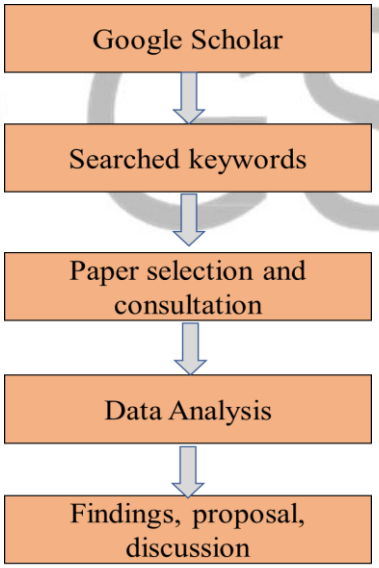

Figure: Conceptual flow chart of the study.

Benefit of ChatGPT : *Increased Efficiency*

According to Deng & Lin, (2023), ChatGPT automates chats to help with efficiency. The lack of manual discussions makes it possible to save time and resources. ChatGPT may also produce responses quickly, enabling speedier dialogues.

Businesses can free up resources and deliver a more individualized customer experience by promptly and accurately responding to customer inquiries using ChatGPT. Unlike conventional AI solutions, ChatGPT uses a large-scale pre-trained language model that enables it to understand client questions and produce responses that sound realistic. The sophisticated NLP technology used by ChatGPT is unmatched in its capacity to offer businesses a thorough, individualized client experience. Thanks to this technology, many firms now have better customer service and more efficiency, which frees them up to concentrate on other crucial responsibilities and expand their operations.

Student Facing Tool

Tajik, (2023) studied that intelligent tutoring systems and other tools geared toward students are being employed in education to assist pupils learn new ideas. ChatGPT can be regarded as a student-facing tool because it helps students develop their writing, critical thinking, and deep learning abilities.

In 1962, Vygotsky made the claim that the development of human cognition is primarily governed by two concepts: spontaneous and scientific. In order to foster higher-order thinking, he stressed the relationship between intuitive conceptions—which come from our daily experiences—and scientific concepts, which are learned in educational settings. The zone of proximal development, which describes the difference between what students can perform without assistance (i.e., spontaneous concepts) and what they can do with support (i.e., scientific concepts), was proposed to close the gap between spontaneous and scientific conceptions. Students may learn the meaning of decimal concepts in formal training, but they may find it difficult to use their newfound understanding in practical contexts, such as figuring out how much to tip at a restaurant or calculating a bill. Students can access an infinite number of instances of decimals in a variety of contexts with the aid of GPT, giving them a deeper and more thorough knowledge of the idea. As a result, GPT can help students become accustomed to the application of novel ideas (such as decimals) in a variety of contextualized scenarios. ChatGPT can also assist students with their studying. Teachers frequently ask students to evaluate the work of their peers, which can result in conflict and unfavorable comments. However, students don't need to be concerned about providing feedback that is incredibly unfavorable or inflammatory when evaluating GPT's product. Students can co-create meaning and increase their knowledge of the topic by bridging the gap between

GPT's accurate and erroneous responses by having back-and-forth dialogues with it. GPT can offer each unique student quick and efficient help tailored comments to assist them in better comprehending the new idea (Pardos & Bhandari, 2023).

The biggest obstacle that pupils must overcome is the illusion of explanation, which is the notion that Students mistakenly believe that they are fully knowledgeable about a certain subject and have limited comprehension. ChatGPT can be quite helpful in minimizing the illusion. By allowing students to incrementally alter the production of GPT and produce basic requests, such as giving chatGPT a persona. This offers students the chance to interact more thoroughly with the subject matter and gain a more precise comprehension of it. Overall, even if students can profit from chatGPT, they still want instruction on how to use GPT to properly comprehend a particular topic by applying logical thought and evaluating GPT's output (Mollick, 2023).

Improved Accuracy

Compared to manual chats, ChatGPT can produce responses that are more accurate. This is due to the fact that it has been trained on a sizable sample of conversational data, enabling it to comprehend the conversational context and produce pertinent responses (Paul et al., 2023).

Using a deep learning-based artificial intelligence (AI) architecture, the ChatGPT Improved Accuracy (CGA) model is a potent natural language processing (NLP) system that generates accurate and insightful discussions. With the help of a pre-trained model from OpenAI's GPT-3, CGA can produce plausible and interesting conversations based on input. The ability of CGA to learn from its mistakes, enabling it to adapt to new circumstances and deliver more accurate outputs, significantly enhances its accuracy and generative capacities. Conversations with chatbots, customer care interactions, and automated customer assistance have all been tried using CGA. Recent studies have demonstrated that CGA outperforms other well-known NLP models in terms of accuracy, coherence, and readability. It has also demonstrated exceptional levels of accuracy and generative powers.

Agricultural Benefit

According to Som, (2023), Through the use of historical data analysis and weather pattern forecasting, ChatGPT can be utilized to create crop predictions. It can also be used to spot things like pests, diseases, and weather patterns that could pose a risk to crops. With the help of extensive

historical crop and meteorological data sets, ChatGPT may be trained to forecast crop yields in the future. In order to give current crop forecasting information, it can also be used to monitor real-time data from weather stations and other sources. Farmers, traders, and purchasers who are analyzing the market can all utilize this knowledge to decide how to plant, fertilize, and harvest their crops.

By examining data on the qualities of the soil, such as its pH level, nutrient content, and moisture levels, ChatGPT can also be utilized to aid with soil analysis. Additionally, it can be used to spot possible problems with the soil, including nutrient deficits or acidity, and offer strategies to fix them. By examining information on crop attributes including yield, quality, and disease susceptibility. ChatGPT can help with crop analysis. Additionally, it can be used to spot possible problems with the crop, like pests, illnesses, and nutrient shortages, and offer strategies to deal with these problems. It also helps in pest identification, Precision farming, irrigation scheduling and farm management, supply chain management, logistics, inventory management and so on (Som, 2023).

Cost Savings

A unique language generation model called ChatGPT created by OpenAI has the potential to drastically cut expenses for companies who use chatbots for customer care. One of ChatGPT's primary advantages is its capacity to produce real-time, human-like responses, which can lessen the need for expensive human customer support employees. Furthermore, ChatGPT has the capacity to learn and develop over time, minimizing the demand for pricey manual upgrades to chatbot responses. Because of these qualities, ChatGPT is a desirable option for companies wishing to boost the effectiveness and efficiency of their customer support operations (Deng & Lin, 2023)

Pharmaceutical Benefit

Zhu et al., (2023) suggested that Artificial intelligence (AI) is a revolutionary technology that has been widely used in a variety of industries, including pharmacy, where it is also attracting growing attention. ChatGPT, a recently created virtual assistant with a wide language model, has recently demonstrated great writing abilities, making it a possible tool for review writing. The public was used in this study to train ChatGPT to create a brief review on the subject of "lipid-based drug

delivery systems" through chat. The findings demonstrated that ChatGPT can provide a logical framework for this subject and presumably complete phrases that can provide people with relevant information. There aren't enough trustworthy citations, therefore the review's correctness and consistency aren't entirely assured. It follows that ChatGPT is unable to provide in-depth discussion, and can only provide general knowledge on the chosen topic.

Solving Programming Bug

Surameery & Shakor, (2023), explored how ChatGPT can be used to fix code issues. ChatGPT can help programmers find issues by assisting with debugging, predicting bugs, and explaining bugs. It is highly suited for these jobs due to its capacity for code snippet analysis and comprehension, as well as its knowledge representation and natural language-generating abilities. It's crucial to remember that ChatGPT is not a perfect solution, despite the fact that it can be a beneficial tool for fixing programming errors. The caliber of the training data and the system's design will determine the caliber of the outputs. It's crucial to employ additional debugging tools and methods as well in order to verify the accuracy of the code's predictions and justifications.

In order to achieve the best results, ChatGPT should be used in concert with other tools and approaches as one component of a complete debugging arsenal. Developers may better understand their code, find and repair issues, and acquire a more thorough understanding of their code by combining the advantages of ChatGPT with the advantages of other debugging tools.It is a promising topic of research to use ChatGPT to fix programming issues, but more research is required to thoroughly assess its advantages and disadvantages. The quality of the training data, the system design, and the particular programming faults being addressed will all affect how well ChatGPT works to fix bugs.

Educational Benefit

Gozalo-Brizuela & Garrido-Merchán, (2023) explained after the deep integration of education with AI technology, is a trend that will significantly change traditional modes of education, improve efficiency and quality, and enable students to adapt to future society's development needs. AI technologies, like Chat GPT, can automatically recommend learning content and methods based on student's abilities and interests. In virtual education, these technologies can create virtual educational environments and develop virtual teachers, enhancing convenience and flexibility. In

educational intelligent management, AI technologies can help allocate teaching resources effectively, providing comprehensive, efficient, and personalized learning experiences. Overall, deep integration of education with AI technology will significantly change the future of education, improve learning services, and help students adapt to the needs of a rapidly changing society.

Securities of ChatGPT

ChatGPT introduces possible security issues, as with any sophisticated machine learning system. The possibility of adversarial attacks, in which an attacker tries to manipulate the model by giving it erroneous inputs that cause it to create inaccurate or undesirable outputs, is a significant worry. Another worry is that ChatGPT might be used to disseminate false information or propaganda, especially if it is coupled with popular platforms like social media. Additionally, the capability of ChatGPT to produce text that appears human-like increases the danger of impersonation and identity theft. When utilizing ChatGPT or other technologies, it is crucial for enterprises and organizations to carefully assess these dangers and put in place the necessary safeguards to reduce them (Deng & Lin, 2023).

Cyber Securities

According to Addington, (2023), ChatGPT is an effective artificial intelligence language model that offers responses in natural language to a wide range of questions and prompts. While ChatGPT has established itself as a useful AI tool for people and businesses all around the world, it also poses possible cybersecurity dangers that require attention.

Cybersecurity risks connected to ChatGPT include the possibility of information leaking, phishing attacks, and the exploitation of natural language processing. The developers of ChatGPT at OpenAI have put in place a number of safeguards, including access limitations, data encryption, and security monitoring, to lessen these dangers. OpenAI takes cybersecurity very seriously and has put in place a wide range of defenses against online dangers. It is crucial to understand that there is always a risk of cyber threats and that no security mechanism is infallible. In order to respond to new threats, it is crucial for enterprises to maintain alertness and regularly upgrade their security measures. These measures are not infallible, though, and there is always a chance of cybersecurity risks, as with every cybersecurity solution. Therefore, it is crucial for ChatGPT users

to be aware of these potential hazards and take the necessary precautions to reduce the risk of cyber-attacks. Users can make sure they can benefit from ChatGPT's many advantages without jeopardizing their cybersecurity by doing this.

Privacy Concern

The rise of Long Term Memory (LLMs) is evident in the rapid growth of chatGPT, which has 100 million active users and has been used by numerous startups. However, privacy concerns remain a significant concern, as LLMs are fueled by personal data. OpenAI's data is systematically scraped from posts, websites, articles, books, and personal information without proper consent, which is considered a privacy violation. Additionally, OpenAI stores personal information partially in accordance with the General Data Protection Regulation (GDPR), but compliance with GDPR is still questionable in some countries. The recent ban on chatGPT in Italy highlights the importance of compliance with regulatory bodies to protect individual privacy information.

Several European countries are also considering banning chatGPT due to data breaches and lack of verification for users' age. Legislation for AI-based systems has been initiated in Europe, but it would take years to take significant effect (Khowaja et al., 2023).

Educational Securities

Kitamura, (2023) stated that the growing use of artificial intelligence technology like Chat GPT has generated a number of ethical issues and legal risks. For instance, Chat GPT may be utilized for intellectual theft and other academic plagiarism, which can have detrimental effects on academic integrity. To avoid this predicament, AI researchers and developers must enhance the safety and usability of self-regulatory mechanisms for technologies like Chat GPT. While doing so, educators should keep improving evaluation processes to ensure fairness and accurately reflect students' skill and knowledge levels (Gordijn & Have, 2023).

Then and only then will we be able to guarantee that Chat GPT has an advantageous effect on education and is sustained over time. To achieve the best educational results from the deep integration of education with artificial intelligence technologies like Chat GPT, AI research and development staff, instructors, and students must work together. In order to promote the safe, dependable, and sustainable implementation of artificial intelligence technologies, it is crucial now

more than ever to concentrate on the ethical and legal concerns surrounding these technologies (Yu, 2023).

Data Securities

Derner & Batistič, (2023), reported that Large language models (LLMs), like ChatGPT, are becoming more and more popular, raising questions about their safety, security dangers, and ethical ramifications. The goal of this article is to give a general overview of the various security threats connected to ChatGPT, such as the generation of malicious text and code, the exposure of personal information, scam services, information collection, and the creation of immoral material. We present an empirical study evaluating the efficiency of ChatGPT's content filters and investigate potential workarounds, highlighting the moral ramifications and security dangers that still exist in LLMs even with safeguards in place. It addressed alternative methods to reduce these risks based on a qualitative examination of the security consequences. We also educate researchers, decision-makers, and business experts about the intricate security issues raised by LLMs like ChatGPT. This work highlights the need for more investigation in this field by adding to the existing conversation on the ethical and security implications of LLMs.

Regarding the security of sharing personal data on fitness apps, ChatGPT was questioned. Overall, the response seemed to be what one might anticipate when submitting personal information on any mobile application or website. The response's effectiveness comes in urging consumers to carefully study the privacy policies of the applications because they differ significantly among popular app categories. The thorough answer also offers advice on steps users can take to safeguard their data against theft or hacking. The first response also emphasizes how simple it is for consumers to foresee privacy issues with fitness apps by checking user reviews and ratings to identify any widespread privacy issues with particular applications that may have been seen by other users.

It is necessary to increase the reaction to the rising concerns about data-sharing practices in fitness apps. Users need to be aware of ambiguous privacy policies, inadequate permission procedures, and the possibility of data sharing. It's critical to review the privacy policies of fitness apps because many of them integrate with other services. Additionally, wearable technology or data acquired may not be subject to US health privacy rules like HIPAA (Nield, 2019). Users should speak with the app owner or service directly for clarification in order to preserve their privacy. It can also be

useful to direct users to privacy-related information in fitness apps (Oviedo-Trespalacios et al., 2016).

Risk of ChatGPT

According to Oviedo-Trespalacios et al., (2023), It has become very popular to use ChatGPT, a highly developed AI language model. It is used in various applications, such as automated customer support, chatbots, and content development, and is trained to interpret and produce human language. Although technology has the potential to provide a lot of advantages, there are also worries about how it may be abused, especially in terms of delivering inaccurate or hazardous safety-related information. A multidisciplinary consortium of experts was established to analyze nine cases in nine different safety domains to examine ChatGPT's capabilities in offering advice on matters of safety: using mobile phones while driving, supervising children near water, crowd management guidelines, precautions to prevent falls in the elderly, air pollution when exercising, intervening when a colleague is upset, managing job demands to prevent burnout, and protecting personal data in fitness. The experts came to the conclusion that using ChatGPT as a source of information and guidance for safety-related concerns carries a high risk.

ChatGPT made false or potentially dangerous claims and placed a strong emphasis on personal accountability, which could have produced an ecological fallacy. The study emphasizes the need for caution when using ChatGPT for safety-related information and expert verification, as well as the need for moral considerations and safeguards to make sure users understand the limitations and receive helpful advice, particularly in low- and middle-income countries. The findings of this inquiry serve as a warning that, even as AI technology develops, vigilance must be taken to make sure that none of its uses endanger public safety (Firat, 2023).

LIMITATION

I, The researcher, acknowledge that this paper needs additional information from a variety of sources to be more trustworthy. Based on data patterns, ChatGPT creates responses, which may be prejudiced or unjust when discussing delicate subjects. It lacks context, real-world knowledge, and is based only on statistical relationships in its responses. This study's usage of ChatGPT poses ethical issues because it could lead to manipulation, deception, or harmful use. Being a model, it is challenging to understand and can yield offensive or unsuitable results. Large language models

need computational resources, and training data could not cover all topics or domains. Phrases used in the input can have a big impact on responses, lowering their reliability. When using ChatGPT for certain objectives, legal and regulatory issues, such as data protection and compliance, may come up. In order to properly address them, the essential safeguards should be followed

CONCLUSION

ChatGPT is a potent NLP system that can produce conversations that sound human. It has a number of advantages, including higher efficiency, more accuracy, and cost savings. It does, however, face significant difficulties, including security issues and restricted capabilities. ChatGPT is a potential AI technology that can be used to automate conversations and produce more accurate responses despite these difficulties.

We can interact, get information, and do a range of tasks and procedures more better by using ChatGPT and other cutting-edge NLP models. With the development and diffusion of these technologies, we can expect to see even more significant advancements and changes in the near future. In conclusion, ChatGPT is a powerful and complex NLP model that can produce text that sounds like human speech in a variety of situations. It is becoming an increasingly valuable tool for a range of applications, including chatbots, language translation, and content production, because to its capacity to comprehend the context and produce relevant responses.

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DATA AVAILABILITY

No datasets were used in this study. Therefore, there are no specific datasets to be accessed or made available.

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