Contents lists available at ScienceDirect

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journal homepage: www.keaipublishing.com/en/journals/benchcouncil-transactions-on-benchmarks-standards-and-evaluations/

Case report

An era of ChatGPT as a significant futuristic support tool: A study on features, abilities, and challenges

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ARTICLE INFO

ABSTRACT

Open Artificial Intelligence (AI) published an AI chatbot tool called ChatGPT at the end of November 2022. Generative Pre-trained Transformer (GPT) architecture is the foundation of ChatGPT. On the internet, ChatGPT has been rapidly growing. This chatbot enables users to discuss with the AI by inputting prompts, and it is based on OpenAI's language model. Although ChatGPT is fantastic and produces exciting results for writing tales, poetry, songs, essays, and other things, it has certain restrictions. Users may ask the bot questions, and it will reply with pertinent, convincing subjects and replies. ChatGPT has now risen to the top of several academic agendas. Administrators create task teams and hold institution-wide meetings to react to the tools, with most of the advice being to adopt this technology. This paper briefs about the ChatGPT and its need. Further, various Progressive Work Flow Processes of the ChatGPT Tool are stated diagrammatically. Specific features and capabilities of the ChatGPT Support System are studied in this paper. Finally, we identified and discussed the significant roles of ChatGPT in the current scenario. The neural language models that form the foundation of character AI have been developed from the bottom up with talks in mind. This technology implies that the programme uses deep learning methods to analyse and produce text. The model "understands" the subtleties of human-produced natural language using vast amounts of data from the internet.

1. Introduction

Open Artificial Intelligence (AI)'s ChatGPT, introduced as a prototype in November 2022, has attracted the interest of engineers, social media users, business owners, authors, and students. Machine learning (ML) undoubtedly has the potential for good, despite many people's concerns towards ChatGPT. ML has influenced various sectors since it was widely adopted, enabling tasks like high-resolution weather predictions and medical imaging analysis [1–3]. ChatGPT has the potential to alter the way various professions are carried out. This chatbot can converse like a person since it was developed using OpenAI. Customers may begin using ChatGPT by creating a free OpenAI account. This technology may leverage user-generated data to enhance its training algorithms [4,5].

The paradigm changes in information access brought about by Chat-GPT may benefit tag-holding industries, including education, research, journalism, mass communication, Information Technology (IT), retail, and many others. Various convincing writing may be produced quickly using generative AI technologies, which can then adapt the writing in response to feedback to make it more suited for the task. This has ramifications for a broad range of sectors, including marketing copy-required businesses and IT and software companies that may profit from the quick, generally accurate code produced by AI models. Additionally, organisations may employ generative AI to produce better technical items, such as upscaled copies of medical photos. Additionally, firms may seek new business prospects and the ability to provide more value with time and resources [6–8].

The organisation behind ChatGPT development has been active in this field for years. OpenAI focuses on initiatives to enhance AI's capabilities and investigate its social effects. While there are many ways to structure an essay, the rigour of mathematics presents its own unique set of problems. Given that there is often just one correct solution to various issues and ChatGPT can demonstrate its operation, a student might efficiently utilise it without the teacher ever knowing [9,10]. The effects of AI might be perceived on an aesthetic level even if it is utilised responsibly, such as to verify grammar or sentence structure. Students can be discouraged or afraid to take chances with their work if the bot asserts that one way to accomplish things is the proper way. Similarly, the student cannot experiment with structure or develop their voice if ChatGPT is used to develop the framework for an assigned essay or written piece [11,12].

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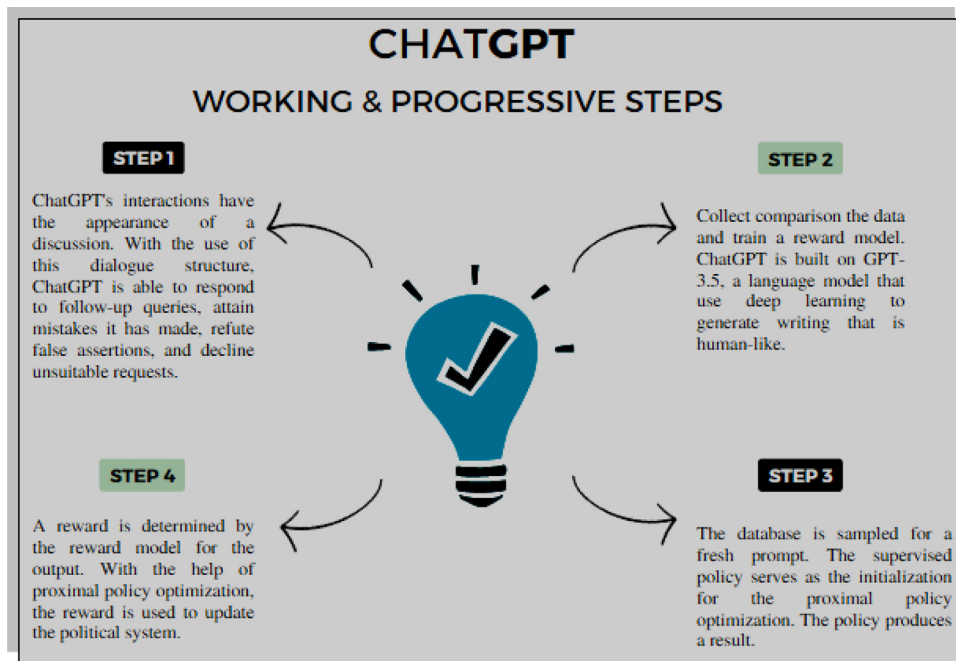
Fig. 1. Progressive steps involved in ChatGPT framework.

Deep learning is the most famous example of AI. In this technology, algorithms are trained on big datasets to generate predictions based on the data. It may include language translation, voice recognition, and picture recognition. AI that understands and produces human language is known as natural language processing. Translation, text summarisation, and sentiment analysis are some examples of this. The varied and creative AI models that ChatGPT utilises are based on unsupervised and semi-supervised ML methods. Images, extended text forms, emails, social media information, voice recordings, computer code, and structured data are just a few examples. They may also provide fresh material, translations, questions and answers, sentiment analysis, summaries, and movies. ChatGPT has the potential to advance a variety of spheres of our life, including healthcare, transportation, and education [13–15].

ChatGPT has quickly taken off on the global stage. Many people reading this need to know what this programme can achieve. This programme can produce unique articles about anything by employing an incredible capacity to fast search stuff online and powerful grammar and writing abilities. ChatGPT is a bot that has been taught to provide replies to user inputs that resemble a person's. It has developed a surprisingly broad range of talents using ML. On-demand, it can create elementary computer code, crude financial analysis, humorous poems and songs, perfect impersonations, reflective essays on just about any subject, summaries of technical papers or scientific ideas in natural language, chat-based customer service, accurate predictions, tailored guidance, and answers [16–18]. The primary research questions of this article are as follows:

RO1: - to brief about the ChatGPT and its need;
RO2: - to discuss the progressive workflow process of the ChatGPT tool;
RO3: - to study specific features and capabilities of the ChatGPT support system;
RO4: - to identify and discuss significant roles of ChatGPT in the current scenario;

2. ChatGPT

ChatGPT, a generative pre-trained transformer, is now attracting so much interest. The word "Generative" or "G" in the acronym GPT speaks for the tool's capacity to produce text. Pre-training, or "P", is

the deployment of a model from one ML job to train another model, much as how individuals utilise prior knowledge to learn new things. ChatGPT offers a substantial amount of text to pre-train on. The neural network T is for "Transformer", which examines the overall connection between every data series component [19–21]. It is a free chatbot that can respond to practically any question. It was created by OpenAI and made available to the public for testing. It is already regarded as the finest AI chatbot ever. The chatbot has been known to produce computer code, college-level essays, poetry, and even half-decent jokes [22,23].

The first ChatGPT model was trained through supervised fine-tuning, in which human AI trainers conversed with both the user and an AI helper. The trainers have access to sample written recommendations to aid with answer composition. ChatGPT, a language model created expressly to comprehend and react to natural language, is one of their most recent innovations. This indicates that it can have natural and intuitive conversations with people. The best part of ChatGPT is that it is freely usable using OpenAI, which enables programmers to incorporate the model into their applications [24–26].

3. Progressive work flow process of ChatGPT tool

To process the ChatGPT working structure, a streamlined flow of information and knowledge is a must. Fig. 1 exemplifies the different working and progressive steps of the ChatGPT system for supporting the routine needs of the social structure. Various four steps are highlighted and discussed with the help of Figure. It started with the interactions and discussion, followed by the data reception and comparison creation. Further, the database gets sampled, and the process gets concluded by determining the reward model and updating the same in the cloud data set [27–29].

Business executives, students, and educators have a lot of potential opportunities to use this technology. Teachers who want to exhibit, explain, and have students apply concepts. A teacher could ask the student to describe their rationale and thinking process for the essay and then compare their explanation to the essay itself [30,31]. If there are significant differences between the essay and the student's explanation, it may indicate that the student employed a text-generation programme like ChatGPT. A teacher could also search for apparent
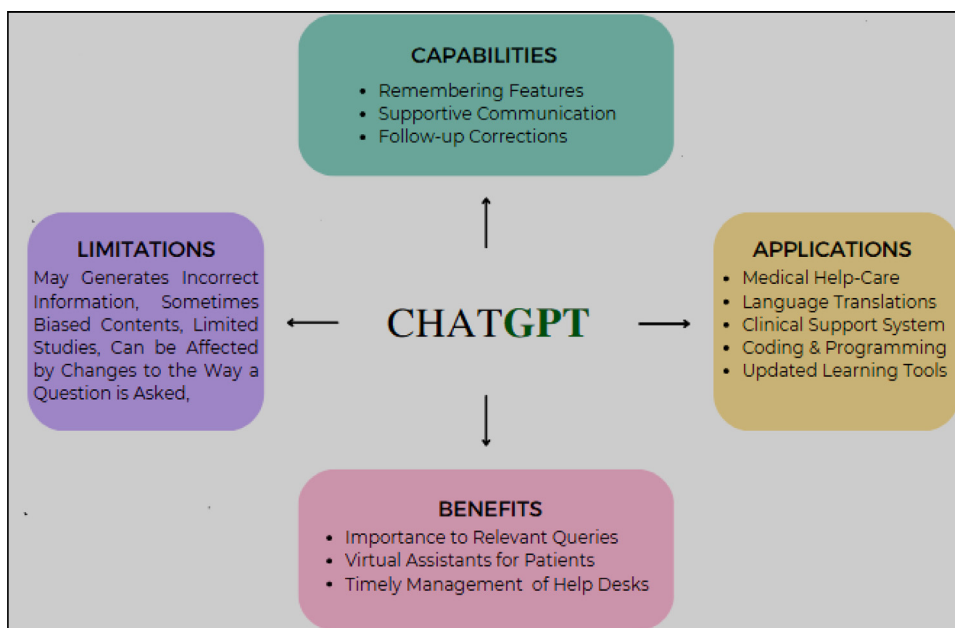
Fig. 2. Capabilities and features of ChatGPT.

indications of text production in the essay. It is common practice to employ ChatGPT for various jobs, from writing high school papers to creating legal documents and even composing legislation. These programmes can virtually instantaneously create more complex written material [32–34].

A teacher may determine if a student produced an essay independently or utilised a text-generation programme like ChatGPT in several ways. Utilising tools that can detect plagiarism is one way to see whether the essay is similar to any other. Text-generating programmes often provide output identical to existing content, and this may be a reliable technique to tell if a student used ChatGPT or another text-generation tool. ChatGTP engages in dialogue with the user, replies to follow-up inquiries, acknowledges and corrects errors, rejects inappropriate requests, and even questions false premises. ChatGPT is designed to respond promptly and thoroughly to instructions [35–38].

4. Specific features and capabilities of the ChatGPT support system

Fig. 2 explores the various associated capabilities, benefits, applications and limitations of ChatGPT support. It includes the features like remembering aspects, supportive communication, follow-up corrections, etc. Apart from these different features and capabilities, various limitations have been observed, such as; the sometimes generation of incorrect information, may rise with biased content, etc. In addition, several other benefits and applications of chatGPT are further represented and elaborated in Fig. 2 [39–41].

ChatGPT's ability to perceive the context and provide meaningful information makes it a helpful tool for collecting, evaluating, and understanding market trends. This technology can enhance current processes, gather qualitative data via informal surveys, analyse data and extract characteristics from vast volumes of unstructured data, give valuable market intelligence, and save researchers time and effort. Natural language processing is entering a new stage as early ChatGPT users show the technology's capacity to continue a discussion through several questions and create software code. Increasingly intricate interactions between people and machines are made possible by AI [42–44].

ChatGPT differs from previous AI models, as it can write software in many languages, debug code, break down a complicated subject into manageable chunks, prepare for interviews, and draft essays. ChatGPT simplifies such processes and even provides the result, much as how

one might research similar subjects online. ChatGPT can produce texts that sound like human speech in an informal setting and perform basic tasks. ChatGPT aims to create a cooperative AI system that can produce language that is helpful, engaging, and contextually relevant [45–48].

5. Significant roles of ChatGPT in the current scenario

ChatGPT is to demonstrate and test the capabilities of a powerful AI system. ChatGPT is a generative AI programme that uses natural language processing to generate text, artwork, music, and video. A large language model powers ChatGPT, however, it needs data in order to function and develop over time. As a person, a model learns the training it receives. The algorithm becomes more adept at seeing patterns to predict future events and produce credible text [49–52]. It used a sequence model built for text production tasks, including question-and-answer, text summarisation, and machine translation. ChatGPT may provide suggestions for goods or information catered to specific needs and interests by studying client data. Businesses can develop distinctive experiences for new audiences, boost engagement, and build trust with the aid of ChatGPT. For companies looking to expand their customer base, access new markets, run efficient marketing campaigns, and forge closer bonds with both existing and prospective clients, ChatGPT may be a valuable tool [53–56]. The significant roles of ChatGPT in the current scenario are discussed in Table 1.

ChatGPT can determine what makes a company successful by examining its marketing tactics, clientele, product attributes, and other elements. It gives recommendations for how our company may adopt or enhance those characteristics. By examining market trends, the client wants, and other variables pertinent to our company, ChatGPT may suggest how to take advantage of these chances and expand our company by examining the product offerings, marketing initiatives, and customer engagement tactics of the rivals. Based on the target demographic, marketing objectives, and budget, ChatGPT may advise on the best channels for a specific campaign [57–59]. Social networking sites, email marketing, search engine marketing, and other digital marketing channels are examples of channels. Performance analytics assist organisations in tracking and evaluating the effectiveness of their digital marketing activities by revealing what works and what does not. To improve outcomes, the campaign plan and tactics may be modified in real-time using this information [60,61].

Table 1
Major roles of ChatGPT in the Current Scenario.

S No	Roles	Description
1.	Gaining widespread interest	• ChatGPT, the most cutting-edge AI language model, gained widespread interest. • It can create suggestions on almost everything, such as composing essays, articles, poetry, translated material, and more. • The AI classifier, a language model trained on a dataset of pairs of texts on the same subject produced by humans and by AI, tries to identify texts created by AI. • It has transformed how people engage with AI using its advanced natural language processing capabilities • ChatGPT has been trained on a vast quantity of text data and is very accurate at understanding and producing human-like replies to various themes. • ChatGPT is a formidable tool that can dramatically increase human productivity and creativity, whether used for answering queries, inspiring creative writing, or helping with daily work.
2.	Variety of language inputs	• Users may leverage ChatGPT's capacity to understand and react to diverse language inputs and obtain simple, uncomplicated answers to inquiries instead of using a search engine like Google • Getting a concise overview of important information is easier since the AI chatbot can explain complicated subjects in various speaking styles. • The training data for ChatGPT comes from the WebText dataset, an extensive collection of online text • This dataset contains a wide variety of text kinds and text styles, including articles, forums, and social media postings • By training on such a comprehensive dataset, ChatGPT can generate text equivalent to what people write • OpenAI's trained ChatGPT model can also analyse code and explain its purpose.
3.	Picking up of latest information	• The capability of ChatGPT to swiftly pick up on and adjust to new information is one of its main features • This indicates that it can handle new subjects and tasks without substantial retraining. • Furthermore, ChatGPT is very scalable, making it ideal for large-scale applications • ChatGPT may be used in various fields, including customer service, education, and entertainment • Natural Language Processing is one of its principal uses • The model is perfect for jobs like language translation, text summarisation, and question–answering since it can produce text depending on inputs. • Moreover, it has been used to develop chatbots and other conversational AI systems that may be applied to customer care and assistance applications • Generative AI may replace several occupations that can produce unique text, audio, and visual material in response to human input • The most popular notion is to employ 'assistants' like tools to make certain occupations more accessible to everyone.
4.	Learning and improving	• The capability of ChatGPT to gain knowledge from its interactions with users is one of its key advantage • It may modify and enhance its reactions when interacting with humans, gradually becoming more precise • The variety of use cases that ChatGPT can support through its adaptability makes it a potent instrument for further development and optimisation of conversational AI systems in the future • Experts predict that the success of ChatGPT will offer OpenAI a competitive edge over other AI firms • Although increasing use strains OpenAI's processing resources, it has also given vital input that has been used to refine the chatbot's replies. • This ChatGPT chatbot is trained on a vast quantity of text data from the internet by using a language model • ChatGPT has been trained using various textual materials, such as books, news stories, webpages, and more, giving it a comprehensive comprehension of various subjects • This model can comprehend the context and provide replies that are suitable for it.
5.	Helpful for a variety of tasks	• It may be used for various things, including creating code, recommending meals, and enhancing the quality of life for older people and those with impairments • The ability to utilise ChatGPT to complete assignments is available since every paper the bot creates is unique. • ChatGPT can react to a broad range of cues, almost nothing beyond its capabilities • The goal of the conversation GPT is to understand a simple statement • It provides us with guidance and assistance on right and wrong in the age of smartphones and computers. • It acts as a humanoid when we need to inquire about a different module since it will research to get the answers • The foundation model will significantly alter how software is developed and used across the technology sector, driven by platforms like the Role of ChatGPT.
6.	Respond to inquiries	• Several businesses are eager to integrate the ChatGPT AI-powered tool into their workflow to provide quick and knowledgeable solutions to frequent client inquiries and improve customer experience • The AI chatbot assists companies in quickly understanding and addressing consumer pain points by scanning the Internet for specific user inquiries and offering a brief overview of pertinent information • ChatGPT is skilled at answering questions, making recommendations, and making predictions • Software developers may use it to find and correct mistakes in their code • The fact that ChatGPT recalls the previous exchange may spur innovation and a surge in the popularity of personalised stress and therapy bots • For content moderation on decentralised social media sites, utilise ChatGPT • Examining the text and photos that users publish may, for instance, weed out spam and improper information.
7.	Business applications	• Businesses may develop more decisive marketing campaigns, engage with their target audience, and accomplish their marketing objectives when marketers use ChatGPT's capabilities. • There are several applications for ChatGPT and generative AI in business • As with almost any technological advancement, exercising caution is essential to ensure that private, sensitive, and secret business and personal information remains where it belongs. • Policymakers should be aware that the risks associated with AI systems created or deployed by various companies may be more significant, given the potentially high stakes for those impacted by choices • Processes search requests, gathers information from many sources, summarises papers, creates travel plans, responds to enquiries, and chats with people using OpenAI technology.

Table 1 (*continued*).

8.	Useful for digital marketers	• ChatGPT might be helpful for digital marketers that wish to enhance their campaigns and engage with their target consumers. • It helps create material for social media updates, blog entries, and other forms of content • The chatbot may recommend headlines, opening words, and even whole paragraphs for inclusion in marketing materials based on a subject or keyword • Digital marketers may better understand their target audience by doing audience research • ChatGPT can find the common traits, habits, and preferences of specific consumer groups by analysing massive amounts of data. • ChatGPT may be taught to respond to frequently asked queries, provide customer service, and suggest product • ChatGPT may be used to group customer reviews and unstructured data into categories based on product features, customer service, and marketing campaigns, improving analysis and understanding of consumer needs and preferences.
9.	Translate concepts	• ChatGPT has the ability to create computer code to create programmes and software • It has the ability to translate concepts from English into the programming language and verify human programmers' language for flaws. • The popularity of this technology is a new generation of generative models, mainly due to how approachable it is to the general public rather than its unique capabilities. • OpenAI's ChatGPT, a sizable language model, can create writing that resembles a person's • It can carry out various activities related to natural language processing, such as conversation systems, language summarisation, and translation • It is trained by using a large dataset of text from the internet.
10.	Better interpretability	• When more users supply information, the chatbot's interpretation skills will improve using reinforcement learning processes through human feedback • As a result, ChatGPT's response quality will advance over time to more effectively suit user demands • After that, the user experience will be enhanced as a result. To gather input and insights from consumers, • GPT may be utilised to design conversational and intelligent surveys. • It makes obtaining more accurate and exciting data possible than conventional surveys. • By examining vast amounts of customer feedback, social media postings, and other unstructured data sources, ChatGPT may be used to identify patterns in consumer views and behaviour.
11.	Genuine conversations	• ChatGPT is designed to look and sound like genuine conversations, and its responses seem very human. • When questioned, the bot can elaborate on ideas, recall what was stated previously in the dialogue, and even apologise when it makes a mistake • The foundation of ChatGPT technology employs supervised and unsupervised AI learning methods to train some of the most prominent language models in the world. • ChatGPT remembers all prior interactions, in contrast to most other chatbots • We may enter inquiries into ChatGPT using natural language, and the chatbot will respond with conversational responses gleaned from vast amounts of data from the internet and other public sources.
12.	Providing a dynamic and interesting way	• It is also a powerful tool to help kids write more dynamically and interestingly • Writing assignments may be better customised to meet the requirements and interests of each student with the help of AI-enabled technologies. • AI-enabled essay writing tools, for instance, may provide prompts in real-time and direct students through the writing process. • Even writing assignments that are customised to the student's interests and ability level may be generated with the aid of AI. • For instance, AI may provide writing prompts based on students' prior writing samples or themes they have previously liked writing about.
13.	Education	• ChatGPT can define words and sentences is impressive, which is helpful for education purposes. • When the chatbot's skills advance and are honed over the next few years, it may alter how students connect with the outside world. • ChatGPT use cases are in the education sector, where instructors may teach just the basics of a subject while providing students a forum to ask questions and clear up any confusion. • ChatGPT is a superior search engine to Google since it relies on the individual requirements and tastes of the user. • It could be the best option for people who prefer a conversational search experience over getting website links as search results.
14.	Developing stronger writing abilities	• It also helps with evaluation and grading, moving the emphasis from fixing mistakes to developing more vital writing abilities. • AI-enabled writing evaluation systems may automatically analyse and mark essays more precisely and effectively than human grading by using AI technologies like machine learning. • Students may further develop their writing talents by using AI systems to provide them with thorough feedback on their essays. • Developing distinctive, attractive, and appealing ad copy for various marketing initiatives may be difficult. • ChatGPT uses AI to produce practical text, which facilitates the work of a digital marketer. • This provides content concepts and structure to increase marketers' efficiency significantly.
15.	Create new things	• A generative AI system is made to create new things based on prior knowledge. • This technology is often created via a method known as machine learning, which entails instructing an artificial intelligence to carry out tasks by exposing it to a tonne of data, which it "trains" on and ultimately learns to duplicate. • For instance, ChatGPT has trained on a sizable amount of material from the internet and dialogue scripts to mimic real discussions. • ChatGPT will influence knowledge workers and the nature of employment in the future as AI becomes more pervasive. • ChatGPT may be used to evaluate customer reviews and determine the general sentiment of a brand, product, or service, providing essential insights into market research and relationship development.
16.	Cover a wide range of topics	• The artificial intelligence research organisation OpenAI's text-generating ChatGPT software can write about various topics in various prose and poetry styles. • It is capable of opining on itself. Similar to other chatbots, ChatGPT runs well. Users enter a question or "prompt" on the OpenAI website, such as "Suggest some prompts to try out a chatbot," • Shortly after, an AI-generated answer is returned. The software generates its responses using text prediction. • Its AI was trained on a large body of online human writing, enabling it to anticipate which word should come after the one before to give the impression of a rational being.

Table 1 (*continued*).

17.	Conduct routine duty at the office level	• The creation of virtual assistants for organisations that can conduct routine duties like making appointments, sending emails, and maintaining social media accounts may be done using ChatGPT. • This might be a wonderful method to automate repetitive operations, optimise workflow, and free up time for busy professionals so they can concentrate on more crucial duties like innovation and research. • OpenAI is at the forefront of generative AI, or technology trained on enormous volumes of text and photos that can generate content from simple language input. • AI has great promise for the creation of cutting-edge cybersecurity tools. Expanding AI and machine learning is essential to spotting possible dangers promptly. ChatGPT may be essential in identifying it, reacting, and enhancing internal communication during a cyberattack.

6. Discussion

AI has a straightforward concept and is now available for free access using OpenAI. A chatbot that can help us with a variety of activities is what we "speak" to. Due to its release, many companies are enthusiastic about utilising ChatGPT to simplify their procedures. Using ML algorithms that evaluate a vast amount of data and understand the patterns and structures of the language, ChatGPT is taught to produce text that resembles that of humans using a generative pre-trained transformer language model. Playing with OpenAI's ChatGPT has recently become quite popular. This artificially intelligent online correspondent will try to react to our inquiries with a paragraph's worth of information and create songs or tales in response to the instructions we provide. Because ChatGPT uses a conversation structure, it is possible to challenge false assumptions, admit mistakes, and reject unsuitable requests. This model can help with various Natural Language Processing problems, and because of its excellent scalability, it is perfect for usage in large-scale applications.

Although this technology has gained popularity over the years, mostly it still needs to be more basic and can only provide basic answers to inquiries on help desk sites or attempt to resolve the problems of dissatisfied consumers. The field of NLP is now gradually moving into a new chapter using ChatGPT's capability to continue a discussion through several questions and create software code. OpenAI intends to provide the tool as an application programming interface, enabling other parties to include it in their websites or applications without familiarity with the underlying technology. Therefore, businesses might soon employ ChatGPT to develop marketing tools, customer service bots, or virtual assistants. They might automate boring operations like document reviews. They may utilise it to produce fresh concepts and streamline decision-making.

Because ChatGPT can quickly compose material based on a prompt, it may be used to create content. ChatGPT may assist users in polishing their work and achieving their literary objectives. It can process, write, and assist in the debugging of code. Unstructured data is redundant because it is hard to handle, organise, and sort. ChatGPT saves the day since it can manipulate data to transform unstructured data into a structured manner. While most public interest in ChatGPT is focused on its text-generation capabilities, its capacity to comprehend that content may have the most significant commercial and social effect. AI uses statistical probability to create a model of the words and sentences that typically follow whatever text came before. It resembles predictive text on a smartphone, but it has been dramatically scaled up to create total replies rather than just single words.

7. Challenges in ChatGPT

According to OpenAI, ChatGPT may sometimes react to damaging instructions or display discriminatory behaviour and occasionally compose plausible-sounding but incorrect or nonsensical responses. It may also respond slowly, another issue that its creators blame. There is cause for excitement about such technologies, mainly if they help reduce obstacles to a better quality of life, such as the racial gaps in reading competence. On the other hand, there are a few techniques to reduce these dangers. Choosing the initial data used to train these algorithms is essential to prevent adding harmful material. Next, firms

can consider utilising more minor, niche models rather than a generic generative AI model. Organisations with more significant resources might alter a generic model based on their own data to match their goals and reduce bias. Organisations should also avoid employing generative AI models for essential choices, such as those requiring significant resources or human well-being, and ensure that a real person reviews the output of a generative AI model before it is published or utilised.

AI can only partially address some of humanity's problems, where sustainability is essential. How well the data and techniques it is trained on are one of the significant AI constraints. As a result, AI systems are limited to making predictions based on the data they have been provided. Another drawback is that AI needs creativity, empathy, and other human-specific abilities. AI systems cannot conceive creatively or comprehend nuanced human emotions since they are only meant to carry out specified jobs. Users should verify the information from reliable sources before relying on ChatGPT responses. ChatGPT utilises just raw text devoid of any links or citations. Unlike Google, it is difficult to confirm the correctness of its responses. In addition, Google is also developing sizable language models of its own and heavily using AI in its search engines as ChatGPT advances. ChatGPT, a sizable language model, is continually trained to improve answer accuracy. Nevertheless, since it is a new technology, the model still needs to receive more instruction. As a result, the AI chatbot could provide inaccurate information. ChatGPT's training data has limits, much like many AI models. The bias in the data and the limitations in the training data might have a detrimental effect on the model's output.

Of course, these new AI technologies cannot read minds. To produce the outcomes the human user is looking for, a novel but less complex kind of human creativity is required in the form of text prompts. The AI system creates consecutive rounds of outputs using iterative prompting, an example of human-AI cooperation until the person authoring the prompts is pleased with the outcomes. The specific risks and possible consequences connected with ChatGPT will ultimately determine the necessary amount of regulation. As with any powerful new technology, it is crucial to carefully assess its possible effects and take precautions to ensure it is utilised morally and responsibly. While many people have praised ChatGPT for increasing their productivity, others have expressed worry about it for understandable reasons. Schools, colleges, and education boards have expressed concerns about employing this technology for submissions and examinations. Not to add that Stack Overflow, a platform for developers, prohibited the usage of chatbots immediately after the launch of ChatGPT due to increased results inaccuracy.

8. Future scope

ChatGPT is picking up new prompts as more and more users feed it. By forgoing conventional education in favour of ChatGPT's shortcuts, students improve AI, making it more useful for users in the future. ChatGPT will have a significant influence on the educational technology sector as well. Many edtech businesses may now provide a subject's foundations while using ChatGPT to give students a place to ask questions and have their worries cleared. Despite its shortcomings, ChatGPT will prove helpful in real-world use situations.

Consequently, companies are eager to use it for profit-making objectives. In the future, AI can help identify which students would profit

the most from which tutors, those who cannot only help bridge learning gaps but also serve as relevant sources of mentorship, guidance, and inspiration. Designing new AI applications needs careful consideration, particularly in light of our society's reactions to the rapidly evolving AI environment, which is a complex mix of fear, optimism, anxiety, astonishment, and wonder.

9. Conclusion

ChatGPT has provided remarkable success since its debut in November 2022. It can generate essays, fictitious tales, haikus, and even cover letters for job applications. ChatGPT can provide solutions to life's most significant and most minor problems. It does this with the help of meticulous supervision from human specialists and information gathered from an incredible volume of material on the internet. ChatGPT can conduct human-like talks on a variety of subjects using natural language. Users of ChatGPT are utilising the platform to help with composing emails, programming code, and answering inquiries on a variety of subjects, including investing. ChatGPT has received extremely excellent feedback thus far, with many appreciating its sophisticated features and simplicity of its use. ChatGPT has the potential to be a significant player in natural language processing. The chatbot responds to our inquiries in a conversational, albeit slightly stiff, manner using the platform of OpenAI. Particularly noteworthy has been ChatGPT's capacity to comprehend and react to a wide variety of issues; some have even suggested that it may completely alter how humans engage with technology. In future, ChatGPT's features will be an excellent tool for businesses in industries like customer service, online learning, and market research. OpenAI and its most significant investors have invested billions in developing, training, and using these models. It may be a wise investment in the long term, positioning OpenAI at the forefront of AI creative tools.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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