



EXPLORING THE ADVANTAGES AND DISADVANTAGES OF CHAT GPT

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Аннотация

Chat GPT (Generative Pre-trained Transformer) - bu tabiiy til so'rovlariga insonga o'xshash javoblarni yaratish qobiliyatiga ega bo'lgan kuchli sun'iy intellekt tili modeli. Biroq, har qanday texnologiya singari, Chat GPT ham o'zining afzalliklari va kamchiliklariga ega. Ushbu maqola Chat GPT ning afzalliklari va cheklovlari hamda uning aloqa, avtomatlashtirish va ijodkorlik kabi turli sohalarga qanday ta'sir qilishini ko'rib chiqadi.

Аннотация

Chat GPT (Generative Pre-trained Transformer) — это мощная языковая модель искусственного интеллекта, способная генерировать человеческие ответы на подсказки на естественном языке. Однако, как и у любой технологии, у Chat GPT есть свои преимущества и недостатки. В этой статье рассматриваются преимущества и ограничения Chat GPT и его влияние на различные области, такие как общение, автоматизация и творчество.

Abstract

Chat GPT (Generative Pre-trained Transformer) is a powerful artificial intelligence language model that has the ability to generate human-like responses to natural language prompts. However, like any technology, Chat GPT has its advantages and disadvantages. This article examines the benefits and limitations of Chat GPT and how it impacts various areas such as communication, automation, and creativity.

Калит сўзлар

Chat GPT, NLP, sun'iy intellekt, CNN tarmog'i, texnologiya, mashinani o'rganish, veb-brauzer, xavfsizlik, chatbot, model.

Ключевые слова

Чат GPT, НЛП, искусственный интеллект, сеть CNN, технология, машинное обучение, веб-браузер, безопасность, чат-бот, модель.

Keywords

Chat GPT, NLP, artificial intelligence, CNN network, technology, machine learning, web browser, security, chatbot, model.

Introduction

Chat GPT is a cutting-edge natural language processing tool that has been gaining increasing attention in recent years. Its ability to generate coherent and contextually appropriate responses has made it a valuable tool for a variety of applications, from language translation to text generation. However, like any technology, Chat GPT has its advantages and disadvantages, which have become the focus of research in recent years. Chat GPT (Generative Pre-Trained Transformer) has been a breakthrough in the field of Natural Language Processing (NLP). It is a language model that has been trained on large amounts of data and has the ability to generate human-like responses to natural language prompts. Through NLP Scholar, we aggregate information about audit and assurance papers into a standard database, and we also add additional metadata such as determining whether a paper is a long paper or a short paper, whether it is a workshop paper or a main conference paper, and whether it is a demo paper [1]. It has become increasingly popular in various applications such as customer service, personal assistants, and chatbots. However, like any technology, Chat GPT has its advantages and disadvantages. In this article, we will examine the benefits and limitations of Chat GPT and how it impacts various areas such as communication, automation, and creativity. Some research papers explain that how Chat GPT, a machine learning program that can perform a range of language-based tasks, is developed and its scale. It also explains how Chat GPT was used to perform an interview, and how its abilities could impact academia and libraries [2]. Chat GPT is designed to generate human-like responses to natural language prompts. It is pre-trained on large amounts of text data using unsupervised learning methods, which allows it to learn the structure and patterns of natural language. Some large-scale parametric training methods have done well on various AI tasks, but there are still some questions about their underlying structure that scientists don't know, and the cost of training these models is still a big problem. However, there are several possible directions researchers could go in based on these challenges [3]. Chat GPT is typically fine-tuned for specific applications such as chatbots, personal assistants, or customer service. Fine-tuning an entire CNN network can take hours, and it is important to have the correct hardware to do so. However, fine-tuning individual blocks can have a significant impact on the network's performance. This study is designed to determine the impact of fine-tuning individual blocks on the network's performance [4]. Fine-tuning involves training the model on specific datasets to adapt it to the language and

context of a particular application. One of the key advantages of Chat GPT is that it is data-efficient, meaning it requires less training data compared to other neural network-based chatbots. This makes it easier to train and deploy in real-world applications. It is also effective at handling open-ended tasks and generating human-like responses, making it a great tool for creating personalized chatbots that can understand and respond to users in a conversational manner. However, Chat GPT also has limitations [5]. One of the main limitations is the potential for bias. Since the model is trained on large amounts of data, it can pick up biases present in the training data. This can result in the chatbot generating inappropriate or insensitive responses. This report discusses Chat GPT's potential for machine translation, including its translation prompt, multilingual translation, and resilience to errors [6]. Additionally, Chat GPT models do not have the ability to understand or empathize with users, which can limit their effectiveness in certain scenarios where a more human touch is required. Overall, Chat GPT is a powerful tool for creating personalized chatbots and other natural language processing applications [7]. Its data efficiency and ability to generate human-like responses make it a popular choice for developers. However, it is important to be aware of its limitations and potential for bias when using it in real-world applications. The role of artificial intelligence in Chat GPT is to learn from large amounts of data and use that knowledge to generate accurate and relevant responses. This is accomplished by training the model on vast amounts of text data, which allows it to recognize patterns in language and use those patterns to generate responses.

Literature Review

Information Retrieval Models are designed to retrieve relevant information from a given dataset of textual information based on user input. These models typically use Shallow Learning algorithms, although Rule-based and Deep Learning algorithms may also be used. Information Retrieval models typically have a pre-defined set of possible answers based on a knowledge base of question-answer pairs. When a user provides input, the chatbot uses an Information Retrieval model to match the input to similar queries in the knowledge base. The output returned to the user is the answer paired with the selected question among those present in the knowledge base, which is similar to how Information Retrieval models are used for web queries. Shum, H.y.; He, X.d.; Li, D. From Eliza to XiaoIce: Challenges and opportunities with social chatbots. *Front. Inf. Technol. Electron. Eng.* 2018, 19, 10–26.

The primary advantage of Information Retrieval models is that they ensure the quality of responses since they are not automatically generated. These models have become increasingly popular with the advent of Web 2.0 and the surge in available textual information that can be retrieved from social media platforms, forums, and chats. Zemčık, T. A Brief History of Chatbots. *DEStech Trans. Comput. Sci. Eng.* 2019, 2019, 14–18.

A significant disadvantage of the Information Retrieval approach is that creating the necessary knowledge base can be a costly, time-consuming, and tedious process. Moreover, a larger volume of data available for a wider knowledge base and greater training set makes it more difficult to match a user's input to the correct answer. To train the system to select the correct answer from the available options, a significant amount

of time and resources must be devoted. Adamopoulou, E.; Moussiades, L. An Overview of Chatbot Technology. *Artif. Intell. Appl. Innov.* 2020, 584, 373–383.

Information Retrieval systems are less suitable as the underlying algorithm for conversational or chit-chat agents because they do not generate answers but rather retrieve them from a pre-defined set in their knowledge base. Personality development is an important trait for social chatbots, which is less feasible with Information Retrieval models. However, recent progress has been made in developing new Information Retrieval algorithms, and it is worth mentioning the Machine Learning algorithms currently being used as the underlying technology for this type of model. Lu, Z.; Li, H. A Deep Architecture for Matching Short Texts. *Adv. Neural Inf. Process. Syst.* 2013, 26, 1367–1375.

Research methodology

This article presents the advantages and limitations of Chat GPT and its role in various areas such as communication, automation and creativity, which operating systems are recommended, including a comparative analysis of the achievements and shortcomings of Chat GPT's current role.

Discussions and results

Advantages of using Chat GPT

Chat GPT can be helpful for tasks that need to be done quickly, such as customer service. It allows you to generate text quickly and accurately, meaning that you can respond to customer questions more quickly and accurately than if you were to respond manually. This makes Chat GPT a good choice for customer service departments [8].

Improved Communication: One of the main advantages of Chat GPT is improved communication. It can assist in bridging language barriers, improving communication between individuals who speak different languages, and supporting individuals with hearing or speech disabilities. For example, chatbots that use Chat GPT can be used in customer service to provide support in multiple languages. They can also help individuals with hearing or speech disabilities to communicate more effectively.

Time-saving: Chat GPT can quickly generate responses to prompts, leading to reduced response time and increased efficiency in tasks such as customer service and support. Chatbots that use Chat GPT can handle a large volume of customer inquiries and respond to them quickly, leading to better customer satisfaction [9].

Personalization: Chat GPT can be fine-tuned to understand individual preferences and generate personalized responses, improving the overall user experience. For example, a chatbot that uses Chat GPT can learn about a customer's preferences and provide customized product recommendations [10].

Automation: Chat GPT can be integrated into workflows, automating various tasks and reducing human involvement. For example, Chat GPT can be used to automatically generate responses to emails or social media messages, reducing the workload of customer service representatives [11].

Multi-Tasking: Chat GPT is capable of handling multiple tasks simultaneously [12]. For example, a chatbot that uses Chat GPT can handle customer inquiries, provide personalized recommendations, and even make reservations or appointments. Chat GPT can be used to generate ideas and content quickly. By breaking down sentences into smaller chunks and analyzing each component, Chat GPT can provide ideas for content on a variety of

topics. This is especially helpful for creative projects, such as writing articles or blog posts.

Benefits GPT chat from cyberwife

As an AI language model, GPT (Generative Pre-trained Transformer) chat can provide various benefits and limitations depending on its use case and implementation. Here are some of them: **Benefits:** **Conversational ability:** GPT chat can have natural language conversations with users, allowing for a more engaging and interactive experience. **Efficiency:** GPT chat can handle multiple users simultaneously, reducing the need for manual human intervention and saving time and resources. **Scalability:** GPT chat can be trained on large amounts of data and can be easily updated and improved over time, allowing for scalability as user demand grows. **24/7 availability:** GPT chat can be available 24/7, providing continuous support to users, and enhancing customer satisfaction. **Flexibility:** GPT chat can be adapted to a wide range of use cases such as customer support, sales, education, or entertainment [18]. **Limitations:** **Understanding context:** GPT chat can sometimes fail to understand the context of a conversation or user intent, leading to irrelevant or incorrect responses. **Bias:** GPT chat can replicate biases present in the training data, leading to discrimination or perpetuation of stereotypes. **Emotional intelligence:** GPT chat lacks the emotional intelligence to understand or interpret emotional cues, leading to robotic or inappropriate responses in certain situations [19]. **Security:** GPT chat may pose a security risk if not designed and implemented correctly, as it may inadvertently share sensitive or confidential information. **Lack of personality:** GPT chat can lack personality and empathy, leading to a less personalized experience for users [20]. In conclusion, GPT chat offers several benefits but also has some limitations that should be carefully considered when designing and implementing it. With appropriate data and model quality, GPT chat can provide a valuable tool to improve user experience, engagement, and customer satisfaction.

Disadvantages of using Chat GPT

One of the main disadvantages of Chat GPT is its limited knowledge. While Chat GPT has been trained on a vast amount of text data, it is still not capable of fully understanding the context and meaning behind certain phrases or concepts. This can lead to inaccurate or irrelevant responses to certain questions or topics. Additionally, Chat GPT's training data may be biased or incomplete, leading to gaps in its knowledge or biases in its responses [25]. For example, if Chat GPT has not been trained on data related to a specific topic or industry, it may struggle to understand the terminology and concepts involved in that area. Another significant disadvantage of Chat GPT is the potential for bias in its responses. Chat GPT's training data is derived from various sources, including books, articles, and websites, which may contain biases and prejudices. These biases can be reflected in Chat GPT's responses, potentially reinforcing existing prejudices or stereotypes. Furthermore, Chat GPT may also learn and amplify biases present in the interactions it has with users. If users consistently interact with Chat GPT in a way that reinforces biases, it may begin to reflect those biases in its responses. To address bias in Chat GPT, it is important to train the model on diverse and representative data sets and to continually monitor its responses for potential biases. Additionally, researchers can employ techniques such as debiasing or

adversarial training to reduce the potential for biases in Chat GPT's responses. Another disadvantage of Chat GPT is its lack of creativity [26]. While Chat GPT can generate text that is grammatically correct and coherent, it may struggle to generate responses that are truly original or creative. This is because Chat GPT operates by generating responses based on patterns and pre-existing data. While it can generate text that is similar to what it has seen in its training data, it may struggle to generate responses that are truly innovative or outside of the box. This limitation can be particularly relevant in certain applications, such as creative writing or marketing, where originality and creativity are highly valued. In these cases, human writers may be better equipped to generate unique and creative content. However, it is worth noting that Chat GPT can still be a valuable tool in many applications, such as customer service or basic information retrieval. In these cases, the ability to generate accurate and coherent responses quickly and efficiently may be more important than creativity. Another disadvantage of Chat GPT is its inability to reason. While Chat GPT can generate responses based on patterns and pre-existing data, it does not have the ability to reason or understand the underlying meaning of the text [28]. This means that Chat GPT may struggle to answer questions that require more than a straightforward response based on existing data. For example, it may struggle to provide an explanation for why something is the way it is or to understand the context behind certain phrases or concepts. In addition, Chat GPT may generate irrelevant or nonsensical responses if it does not have the proper context or understanding of the text it is generating. For example, it may generate a response that appears to be relevant but is actually off-topic or nonsensical. Overall, while Chat GPT can be a valuable tool for generating text, it is important to be aware of its limitations in terms of reasoning and understanding the underlying meaning of the text. In situations where reasoning or context is important, it may be necessary to supplement Chat GPT with human expertise. One of the significant disadvantages of Chat GPT is the ethical concerns surrounding its use. The use of Chat GPT in certain applications, such as creating fake news or deepfakes, raises ethical concerns about the impact on society and the potential misuse of this technology [28]. One concern is the potential for Chat GPT to be used to spread misinformation or propaganda. As Chat GPT can generate coherent and convincing text, it can be used to create false news stories or misleading information, potentially leading to harmful consequences.

Another concern is the potential for Chat GPT to be used to create deepfakes, which are videos or images that have been manipulated to show something that did not actually happen. Deepfakes can be used for malicious purposes, such as creating fake videos of politicians or celebrities, which can damage their reputations and lead to other negative consequences.

Additionally, the use of Chat GPT raises broader ethical concerns about the role of artificial intelligence in society, including issues related to privacy, security, and accountability. As Chat GPT becomes more advanced, it is essential to consider these ethical concerns and to implement appropriate safeguards to ensure that the technology is used in a responsible and ethical manner.

Overall, while Chat GPT has many potential applications, it is important to be aware of the ethical concerns surrounding its use and to implement appropriate safeguards to ensure that the technology is used in a responsible and ethical manner

Potential disadvantages of Chat GPT

There is the potential for plagiarism with Chat GPT. This could lead users to copy and paste information from other sources without properly attributing them, and this could have legal consequences if discovered. Therefore, it is important to be aware of the risk and to avoid plagiarism at all costs [13]. Bias: One of the main disadvantages of Chat GPT is the potential for bias. Chat GPT can inherit biases from its training data, leading to the generation of biased responses. These biases can perpetuate negative stereotypes and impact social justice issues. For example, a chatbot that uses Chat GPT may be biased against certain races or genders. Lack of empathy: Chat GPT lacks human emotions and empathy, which can negatively impact its ability to understand human emotions and provide empathetic responses [14]. For example, a chatbot that uses Chat GPT may not be able to provide emotional support to a customer who is going through a difficult time. Security Risks: Chat GPT can be manipulated to generate malicious responses, leading to security risks such as phishing attacks and social engineering [15]. For example, a chatbot that uses Chat GPT may be used to obtain personal information from a customer. Limited Creativity: Chat GPT generates responses based on pre-existing patterns, leading to limited creativity in generating new and innovative content. For example, a chatbot that uses Chat GPT may not be able to provide new or innovative solutions to a customer's problem. Ethical Concerns: Chat GPT raises ethical concerns around the use of AI in decision-making. For example, a chatbot that uses Chat GPT may be used to make decisions that impact people's lives, such as determining eligibility for a loan or insurance [16]. Dependency: As the technology becomes more advanced and integrated into our lives, there is a risk of becoming too dependent on it. This can have negative consequences in the event of a technological failure or malfunction [17]. users must be realistic about the Chat GPT chatbot's ability to produce perfect results right away. This is an advantage in cases where users want to customize the chatbot's responses, but it also means that users will need to invest time training it to produce more accurate responses. This can be a complication for some users, so it is important to consider whether Chat GPT is the right tool for the job before making a decision.

System requirements of using chat GPT

The system requirements for using Chat GPT may vary depending on the specific implementation and use case. However, here are some general guidelines for the system requirements for using Chat GPT: Internet Connection: Chat GPT is an online-based language model, and it requires a stable and reliable internet connection for users to interact with the system. Device: Chat GPT can be accessed from a variety of devices, including desktop computers, laptops, smartphones, and tablets [21]. The device should have sufficient processing power, memory, and storage to handle the demands of running the software application. Web Browser: Chat GPT can be accessed through a web browser such as Chrome, Firefox, or Safari, which should be up-to-date to ensure compatibility with the latest web standards. RAM: Chat GPT requires a significant amount of memory to perform well, and at least 8GB of RAM is recommended for a smooth experience. CPU: Chat GPT relies heavily on the CPU to perform language processing, and a modern CPU with at least four cores and a clock speed of 2 GHz or higher is recommended. GPU: Chat GPT can also benefit from the additional processing power of a graphics processing unit (GPU), especially for more advanced applications

such as natural language generation. A modern GPU with at least 4GB of VRAM is recommended. Storage: Chat GPT does not require significant amounts of storage space, as most of the processing is done on remote servers. However, sufficient storage space should be available for caching and storing data, as well as for other applications and files. It is important to note that the system requirements for Chat GPT can vary depending on the specific implementation and use case, and it is always recommended to consult with the software vendor or system administrator for specific requirements and recommendations.

System requirements of using chat GPT in operation platforms

The system requirements for using Chat GPT in operating platforms can also vary depending on the specific platform and implementation. Here are some general guidelines for the system requirements of using Chat GPT in different operating platforms:

Windows: Chat GPT can be accessed through a web browser on Windows operating systems, such as Windows 10. The system requirements for using Chat GPT on Windows include a stable internet connection, a device with at least 8GB of RAM, a modern CPU with at least four cores and a clock speed of 2 GHz or higher, an up-to-date web browser (such as Chrome or Firefox), and sufficient storage space.

Mac OS: Chat GPT can be accessed through a web browser on Mac OS systems, such as macOS Big Sur. The system requirements for using Chat GPT on Mac OS include a stable internet connection, a device with at least 8GB of RAM, a modern CPU with at least four cores and a clock speed of 2 GHz or higher, an up-to-date web browser (such as Safari or Chrome), and sufficient storage space.

Linux: Chat GPT can also be accessed through a web browser on Linux operating systems, such as Ubuntu. The system requirements for using Chat GPT on Linux include a stable internet connection, a device with at least 8GB of RAM, a modern CPU with at least four cores and a clock speed of 2 GHz or higher, an up-to-date web browser (such as Firefox or Chrome), and sufficient storage space.

It is important to note that the system requirements for using Chat GPT can vary depending on the specific implementation and use case, and it is always recommended to consult with the software vendor or system administrator for specific requirements and recommendations for the specific platform [22]. The system requirements for using Chat GPT in general purpose operating platforms are relatively similar and include the following. **Internet Connection:** A stable and reliable internet connection is required to interact with Chat GPT. **Device:** Chat GPT can be accessed from a variety of devices, including desktop computers, laptops, smartphones, and tablets [23]. The device should have sufficient processing power, memory, and storage to handle the demands of running the software application. **RAM:** At least 8GB of RAM is recommended for a smooth experience when using Chat GPT. **CPU:** A modern CPU with at least four cores and a clock speed of 2 GHz or higher is recommended to handle the processing demands of Chat GPT.

Web Browser: Chat GPT can be accessed through a web browser such as Chrome, Firefox, or Safari, which should be up-to-date to ensure compatibility with the latest web standards. **GPU:** A modern GPU with at least 4GB of VRAM can help enhance performance for more advanced applications. **Storage:** Sufficient storage space should

be available for caching and storing data, as well as for other applications and files [24]. It is important to note that the specific requirements for Chat GPT can vary depending on the implementation and use case, and it is always recommended to consult with the software vendor or system administrator for specific requirements and recommendations.

Using Chat GPT for discussion and results involves interacting with the language model to generate responses and insights on a particular topic. This can involve asking questions, providing prompts, or inputting data to get personalized feedback or recommendations [29]. Chat GPT uses natural language processing and machine learning algorithms to generate responses based on the input it receives. The goal is to have a conversation with the language model to gain insights, learn new information, or solve problems. Chat GPT can be used in a variety of contexts, such as research, customer support, education, or personal productivity. Advantages of using Chat GPT for discussion and results is:

Wide range of knowledge: Chat GPT has been trained on a large amount of data and has the ability to generate responses based on a wide range of topics and subjects.

Real-time interaction: Chat GPT can provide real-time interaction, which allows for immediate feedback and responses to questions and inquiries.

Consistency: Chat GPT is consistent in its responses and does not get tired or lose focus like humans might. This allows for a reliable and consistent source of information.

Accessibility: Chat GPT can be accessed from anywhere with an internet connection, making it an accessible tool for anyone with a device.

Speed: Chat GPT can generate responses quickly, which can save time in research or information gathering.

Disadvantages of using Chat GPT for discussion and results:

Lack of human touch: Chat GPT lacks the human touch that comes with interacting with a real person. This can make it difficult to build relationships and rapport.

Limited emotional intelligence: Chat GPT is not able to fully understand or respond to emotional nuances in language, which can make it difficult for it to provide appropriate emotional support or guidance.

Bias: Chat GPT is only as unbiased as the data it has been trained on, which can result in biased or inaccurate responses to certain topics or questions.

Lack of creativity: Chat GPT is limited in its ability to think creatively or come up with new ideas, which can make it less useful for tasks that require creative thinking or problem-solving.

Limited context: Chat GPT may not always be able to provide context for its responses, which can lead to misunderstandings or incomplete information.

Conclusion

Chat GPT is a powerful technology that has the potential to transform communication, automation, and creativity. However, it is not without its limitations. The potential for bias and security risks should be carefully considered, and measures should be taken to mitigate these risks. Additionally, the lack of empathy and limited creativity of Chat GPT must be considered when developing its applications. By understanding the advantages and disadvantages of Chat GPT, we can better utilize this technology to support our needs while minimizing its limitations. On the other hand, the

operating system plays an important role in accessing and using Chat GPT, providing a platform for users to interact with the system, multitask, ensure compatibility, security, and customization, and optimize performance.

The system requirements for using Chat GPT are relatively modest and include a stable internet connection, a device with at least 8GB of RAM, a modern CPU with at least four cores and a clock speed of 2 GHz or higher, and an up-to-date web browser. Additionally, a modern GPU with at least 4GB of VRAM can help enhance performance for more advanced applications. The system requirements can vary depending on the specific implementation and use case, and it is always recommended to consult with the software vendor or system administrator for specific requirements and recommendations.

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