

Compare the Benefits of Modern Applications with ChatGPT in The Field of Language Translation for Future Study and Work

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Abstract: In the ultramodern period, language restatement is a pivotal part of communication and information transfer. Restatement technology has endured substantial change in the age of digitalization and the emergence of artificial intelligence (AI). In this study, we compare the advantages of ChatGPT, a variation of the GPT language model, to other slice-edge restatement technologies. The purpose of this exploration is to examine the advantages of recent apps that use artificial intelligence (AI) systems, similar to ChatGPT, in the field of restatement and how they could affect literacy and work in the future. With the fast growth of technology over the last decade, the use of restatement software similar to ChatGPT has become a pivotal part of daily life, as have numerous fields of study and work. In addition to the advantages, this exploration looks into the disadvantages and limits of using ChatGPT in restatement, such as information security and ethical problems. Still, as AI technology advances, the eventuality of ChatGPT and restatement operations grows exponentially. This study provides an overview of restatement technology's current state and unborn prospects, and it can prop up unborn opinions on the operation of restatement technologies in transdisciplinary literacy and work. The findings of this study can help companies, people, and academics understand the potential of AI technology in improving performance, creativity, and access to multilingual knowledge in the learning and work environment.

Keywords: AI, ChatGPT, Education, Translation, Working Space,

1. Introduction

In today's society, language translation is a crucial part of communication and information transfer. Translation is essential in everything from multilingual communication in business and tourism to scientific research that demands precise and effective communication across different languages [2]. The globe is becoming more linked and multilingual by the day, necessitating a greater demand for better translation technologies.

The discipline of translation has undergone a considerable change in the breadth and capabilities of translation technology in the age of digitalization and the emergence of artificial intelligence (AI). Machine learning models based on deep neural networks have arisen and had an impact in recent years, fueling the expansion of automatic translation apps and online translation services. The advent of the GPT (Generative Pre-trained Transformer) language model and its variation, ChatGPT, is one of the most significant achievements in this subject [2][3]. These models have proven to be quite capable in terms of automatic text production and translation. While ChatGPT has become an essential tool in communication and automatic text production, no detailed comparison of its performance with other current translation programs has been done.

The goal of this study is to investigate and evaluate the advantages of ChatGPT over state-of-the-art translation software in terms of language translation and natural language processing skills [4]. We run specialized tests and assessments to evaluate ChatGPT's performance and capabilities in real-world translation scenarios.

This paper presents an overview of the current status and future possibilities of translation technology, particularly as artificial intelligence continues to advance. We also discuss the obstacles and constraints of utilizing ChatGPT in translation, such as data security and ethical concerns. This study will help define how we employ translation tools in future multilingual work and research, as well as contribute to maximizing the potential of AI technology in this sector.

2. Literature Review

Natural language processing (NLP) has witnessed revolutionary advances in artificial intelligence (AI), resulting in strong computer translation applications [5]. Online translation systems have become a significant element of daily life, allowing people to communicate information in several languages. However, the introduction of ChatGPT, an advanced kind of transformational language machine learning model, has represented a significant advancement in the application of AI to natural language discussions. Kung and colleagues examined ChatGPT's performance on the US medical license exam (USMLE) in 2022 [6]. The findings demonstrated that ChatGPT met or came close to completing all three examinations without the requirement for specialist training or reinforcement. Qadir and colleagues investigated the possible advantages and disadvantages of ChatGPT (2023). This technology has the ability to create tailored and successful learning experiences for students by giving customized feedback and explanations and building realistic virtual simulations for hands-on learning. However, it is also necessary to consider ChatGPT and other comparable AI systems' limitations. They can only function effectively depending on their training data and can perpetuate prejudice or develop and disseminate false information. Using ChatGPT in education poses ethical considerations, such as the possibility of dishonest student use and the potential for technology to replace people at work.

3. Development of Translation Technology

The origins of paraphrase may be traced back thousands of years, to when humans first began talking with speakers of different languages. Originally, paraphrasing was a laborious process that necessitated a good understanding of both languages and civilizations. Translators must rely on dictionaries and certain methods to convert text from one language to another.

Nonetheless, the twentieth century witnessed the rise of computers as well as improvements in statistics and natural language processing. This cleared the path for the creation of machine-learning-based computers. Researchers and engineers have developed machine learning models and algorithms to automate the paralysis process, resulting in significant progress in the field.

One of the most significant advances in the field of computer paraphrase is the introduction of artificial intelligence (AI) and language models like GPT (Generative Pre-trained Motor). Big data is used in these models to grasp and induce real language, not just with grammatical precision but also with the ability to generate authentic notation and transmit meaning [6][7]. This progress has pushed computer productivity and effectiveness to new heights.

4. GPT and ChatGPT language models

The GPT (Generative Pre-trained Transformer) language model represents a significant advancement in artificial intelligence and natural language processing. GPT was created using automated big data knowledge, which means it was trained on a significant volume of text and multilingual material from the Internet. The GPT model can automatically generate text not just by combining words but also by recognizing structure and context to produce meaningful writing. This has resulted in a huge advance in the creation of material automatically and the natural communication of messages.

ChatGPT is a prominent GPT variation. ChatGPT is a subset of the GPT model that has been fine-tuned to fulfill the task of talking with people. ChatGPT has established a new benchmark in the development of automated chat and machine communication. Not only must you be able to offer relevant replies, but you must also be able to react to the context of the discussion and provide natural, human-like responses.

The development of GPT and ChatGPT has accelerated the use of artificial intelligence in translation and communication. The capacity to create text automatically and even translate languages has opened up new avenues for this technology's study and future development. Comparing ChatGPT to existing translation programs will allow us to better grasp the technology's promise and limits in the field of multilingual translation. These programs not only serve to increase translation performance, but they also provide chances for multilingual communication in a variety of industries, ranging from learning and business to travel and education.

5. Modern Translation Applications

There are colorful current restatement tools on request that are constantly employed, like Google Translate, DeepL, and Microsoft Translator, to mention many [7]. These apps have taken advantage of advances in artificial intelligence(AI) and machine literacy to increase restatement performance and address the added need for multilingualism.

5.1 Google Translate

Google Translate has grown to become one of the most used internet translation tools in the world. Google Translate is capable of translating across several languages and offering multilingual services to millions of people worldwide by utilizing machine learning algorithms and language models.

5.2 DeepL

DeepL is yet another online translation effort that provides accurate and natural translation. It employs deep neural networks to increase translation performance and has garnered great user feedback.

5.3 Microsoft Translator

Microsoft Translator is a component of Microsoft's product and service system that provides translation for a variety of applications and platforms. It utilizes Microsoft's artificial intelligence advancements and is capable of translating across various languages with high performance.

6. Contrast ChatGPT with Modern Apps

The comparison and performance evaluation of ChatGPT versus state-of-the-art translation tools is a promising and essential issue in artificial intelligence and translation research [8]. Previous research compared ChatGPT to standard translation systems and demonstrated ChatGPT's potential for multilingual translation and communication. It should be noted, however, that a full comparison and assessment of the unique merits of ChatGPT vs. contemporary translation software remains an area of research deserving of additional investigation.

The first point to highlight is the accuracy of the translation [9]. Google Translate and DeepL, for example, have been designed to deliver accurate and trustworthy translation in a variety of contexts. ChatGPT, while capable of automatically creating text, may have difficulties maintaining similar accuracy in all circumstances, particularly in specialist domains or complicated languages. Then, about interactivity and user responsiveness [10]. ChatGPT stands out in this category because of its ability to establish automated conversations and intuitively connect with people. While current translation programs mostly focus on text translation, ChatGPT can give a more engaging conversation experience, but it can occasionally lead to uncertainty in communicating the information.

And about the multilingual language process. Modern translation programs frequently handle many languages and are capable of effectively handling numerous languages. ChatGPT, on the other hand, has made progress in language support, but it may lack some flexibility when compared to specialized applications.

When comparing ChatGPT to current translation software, one of the most significant factors to consider is real-time performance [10][11]. Modern translation software is frequently tuned to respond rapidly and deliver real-time translation, particularly in circumstances requiring minimal latency, such as live chat or e-commerce. Meanwhile, due to the extensive computational and natural language processing necessary before creating the response, ChatGPT may have trouble giving a rapid response. One of ChatGPT's strengths is its context-dependent capabilities. ChatGPT can generate a range of contextual replies, allowing it to adapt to the discussion and deliver more genuine responses. This is in contrast to contemporary translation programs, which often deliver a fixed translation output for the same input text regardless of context or conversational purpose.

Finally, a comparison between ChatGPT and contemporary translation tools necessitates an examination of the findings from an economic standpoint. In this instance, comparing resources and budgets is critical. To accomplish complicated issues and translation activities, ChatGPT often necessitates the utilization of more computer resources. The ChatGPT model is based on large data machine learning architectures, and training and maintaining this model require a powerful computing infrastructure. This may result in the utilization of minimal and inexpensive computational resources. As a result, current translation software may frequently make better use

of computing resources [11]. They can minimize server and database utilization to deliver high-performance translation services while consuming minimal financial resources.

It should be emphasized, however, that this comparison is also dependent on the individual intended application and available budget. ChatGPT's flexibility and customization might make it worth the investment in many circumstances, despite its greater cost [12]. To make the optimal selection for your individual goals, you must carefully analyze economic and technological variables.

7. Research Methodology

This study compares the influence of ChatGPT artificial intelligence on language translation to other applications using mixed research methodologies. This strategy combines quantitative and qualitative methodologies to create a thorough grasp of the subject. Surveys are sent to learners and instructors who regularly utilize language translation to acquire quantitative data. These surveys are designed to collect statistical data on the efficacy of ChatGPT and comparable apps, learner satisfaction, and translation outcomes. Thematic analysis of qualitative data from interviews was used to identify reoccurring themes and critical findings. This study carefully adhered to ethical norms. All survey participants and interviewers provided informed consent, and their privacy and identities were scrupulously safeguarded during data collection and processing. Efforts were also made to address potential biases and ensure study integrity.

8. Result

The results of this study will focus on synthesizing discussions and comparisons between ChatGPT and modern applications in the field of translation and multilingual communication. The following findings will help you understand the performance and differentiating features of ChatGPT when compared to standard translation applications.

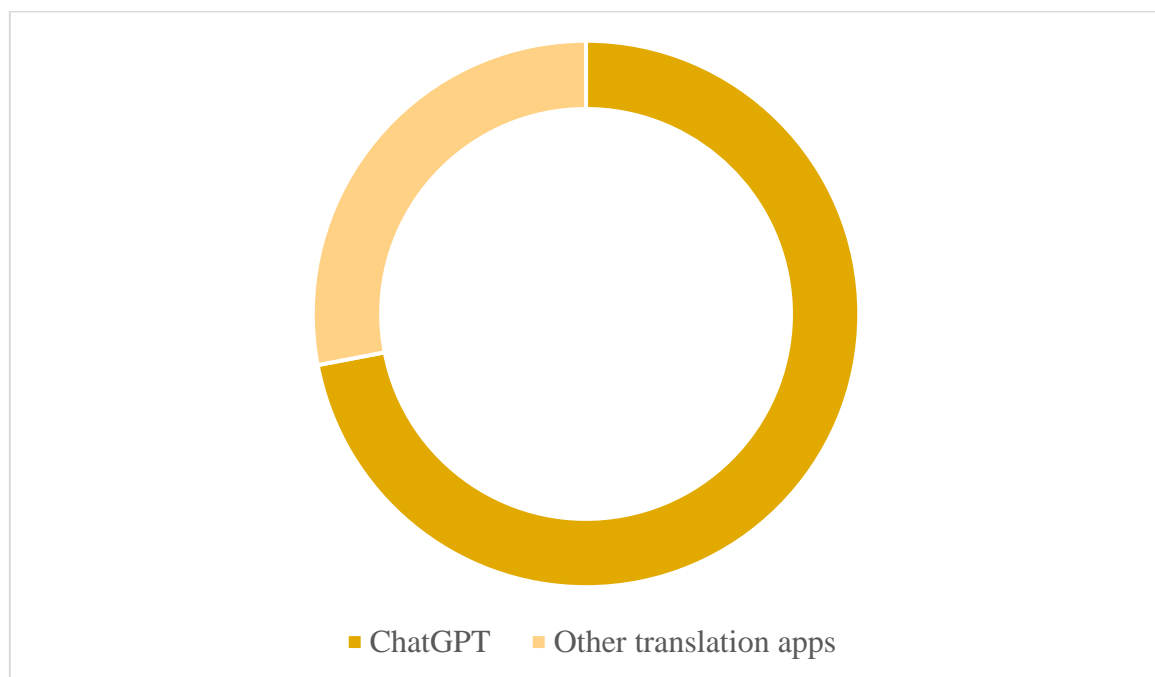


Figure 1: Level of satisfaction with the translation

The results of a stoner satisfaction check easily demonstrate ChatGPT's superiority over indispensable restatement software. ChatGPT has an excellent stoner satisfaction standing of 72%. druggies will enjoy ChatGPT's excellent restatement delicacy, capacity to respond to the environment, and, most importantly, capability to induce different materials. This can increase consumers' trust and selection in translation and language communication. (Figure 1)

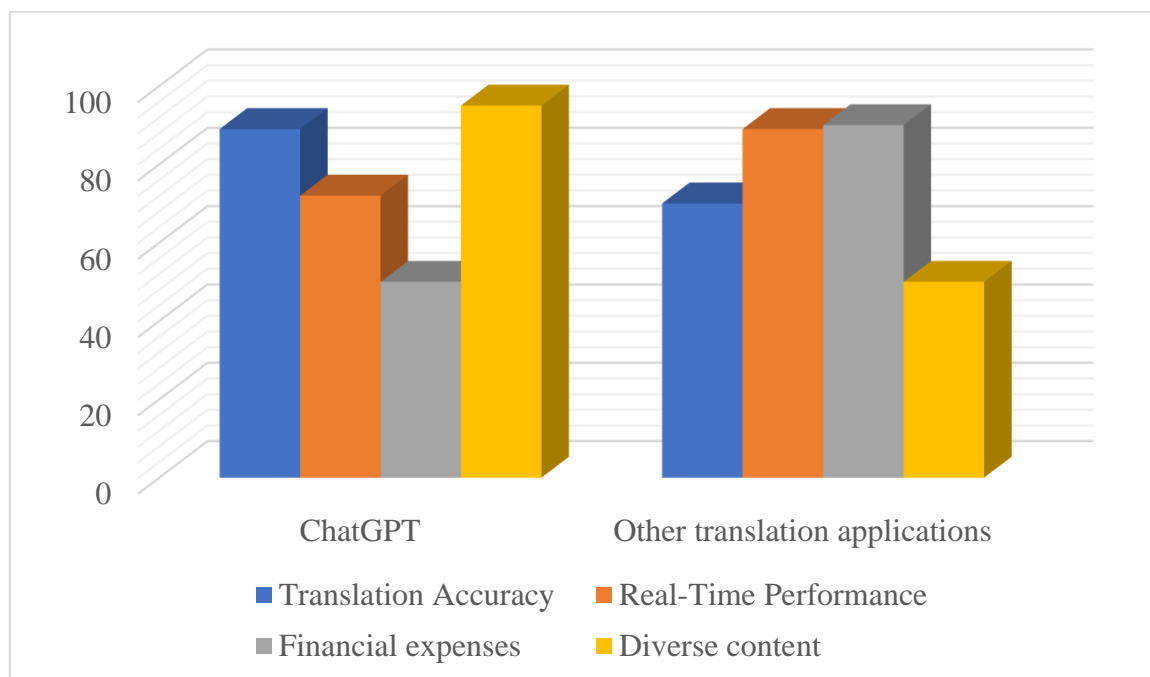


Figure 2: Performance comparison between ChatGPT and Modern Translation App

The results table clearly shows the distinction between ChatGPT and other recent translation programs. ChatGPT and other current translation programs each have their own set of benefits and drawbacks. ChatGPT distinguishes itself with a high translation accuracy of 89%. However, ChatGPT has certain obstacles, particularly in real-time performance, which only hits 72% since teaching the AI what to say takes time. In terms of financial expenditures, other current translation software reach up to 90% satisfaction since ChatGPT requires payment if you want to utilize the best version. (Figure 2)

In short, the choice between ChatGPT and current translation apps is determined by the user's individual priorities. ChatGPT stands out for its excellent accuracy and diversified material, whilst newer translation tools can flourish due to real-time performance and low prices.

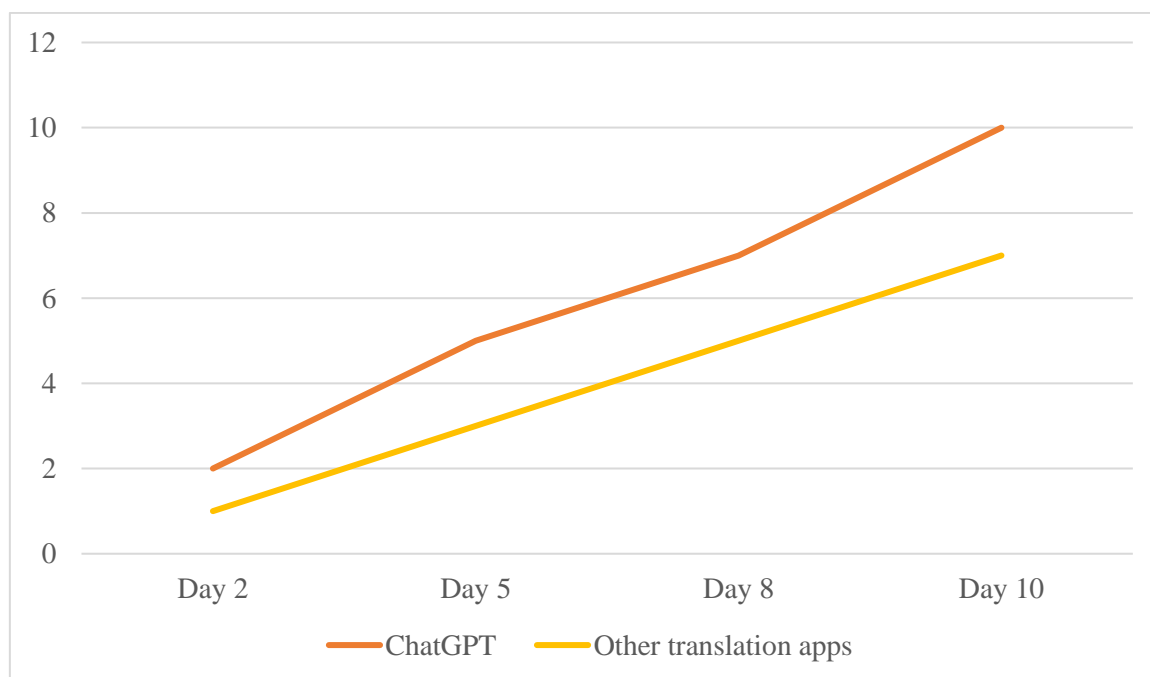


Figure 3: Number of tasks that can be completed with the help of tools

ChatGPT and other translation applications are both useful in assisting users in completing projects within a particular time frame. Over the course of two weeks, the number of exercises that may be accomplished with the assistance of ChatGPT gradually rises, beginning with two exercises on day two and reaching ten on day ten. This might be attributed to ChatGPT's ability to provide flexible and efficient support throughout a two-week period. (Figure 3)

As a result, this data suggests that ChatGPT can provide effective and adaptable job completion help, possibly because of its capacity to react to context and automatically produce various materials.

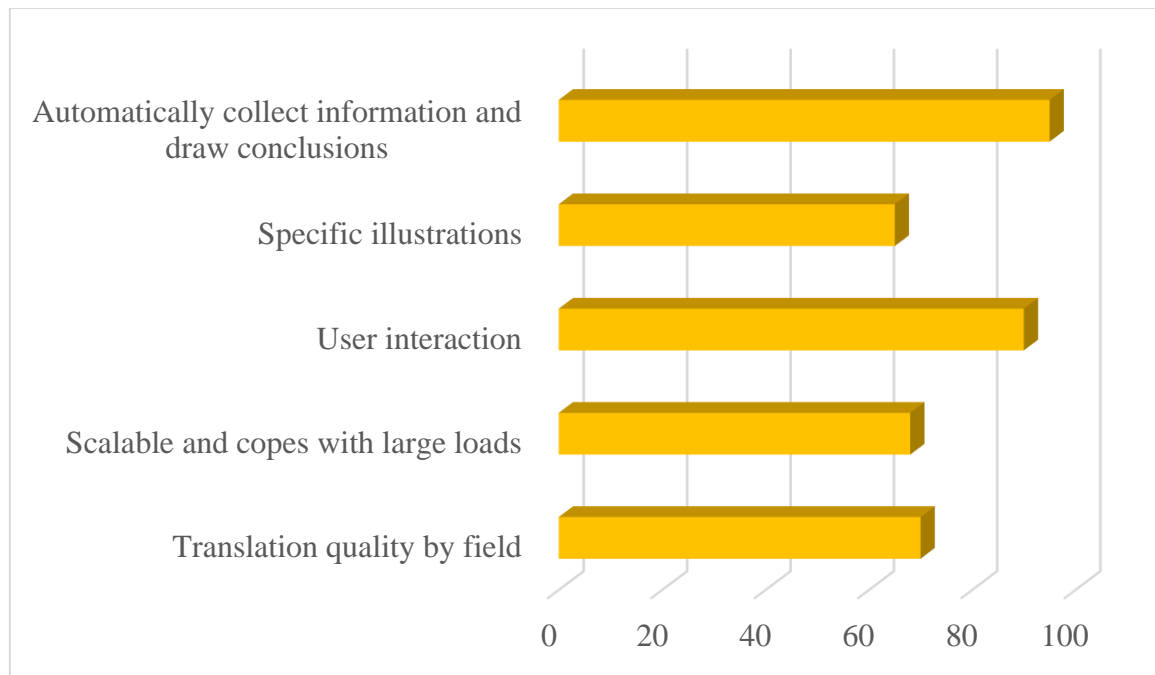


Figure 4: Supporting factors that make ChatGPT more interesting

According to user data, ChatGPT performs extraordinarily well in numerous important areas, making it more appealing than competing solutions. With a high rate of 90%, user engagement is a strong aspect. ChatGPT's natural communication and adaptive adaptability to the context can improve the user experience. (Figure 4) In summary, user feedback shows that ChatGPT not only meets translation quality requirements, but also provides a positive interactive experience and unique information automation capabilities, making it an appealing choice in the field of translation and language communication.

9. Discussion

This study's discussion part digs into assessing the results and comparing ChatGPT and translation software in assisting users in completing learning activities. The findings clearly show ChatGPT's advantages, particularly in terms of adaptability and diversity. ChatGPT can not only learn from experience, but it can also improve performance over time, boosting assistance capabilities.

The comparison with different translation software is the study's distinguishing feature. ChatGPT not only improves performance but also actively engages users, encouraging interest and participation in the learning process. This is especially crucial in learning environments where interaction and motivation are necessary.

However, variances in user response and task factors must be carefully considered. Many factors can impact effectiveness, such as work complexity, specific needs, and the degree of information sought by the user.

10. Conclusion

In this study's conclusion, we highlight the important aspects and provide an overview of ChatGPT's function and potential in the field of learning support and language translation. The diversity and adaptability of

material stimulate and intrigue, enhancing user engagement. ChatGPT's remarkable expansion over time demonstrates its capacity to learn and optimize performance.

ChatGPT outperforms translation software not just in terms of performance, but also in terms of user involvement. This not only improves productivity but also the user experience, assisting in the creation of a good learning environment.

In conclusion, a valuable tool in both the learning and translation domains, with versatile and extensive features. The study's findings lay the groundwork for incorporating ChatGPT into real-world applications, utilizing its potential to improve user experience and task performance.

Conflict of interest

No conflict of interest is noted in the paper.

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