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# Evolution and Development of Artificial Intelligence Interpretation Technology in the Age of Large-scale Language Models



**Abstract:** - With the continuous development of artificial intelligence technology, large-scale language models have become an important breakthrough in the field of interpreting intelligence technology, and the interpreting profession is facing unprecedented technological changes; Through reviewing the relevant research background, it was found that the rise of large models has brought new opportunities and challenges to the development of artificial intelligence interpreting technology; Firstly, the language generation ability of the large model is powerful, which can achieve more accurate and natural interpretation and translation results. Secondly, large models have strong learning abilities and can continuously optimize the performance of interpretation systems through large-scale data training. In addition, the large model also has the characteristic of fast response, which can provide efficient interpretation services in real-time scenarios; The age of large models provides new opportunities and prospects for the transformation and development of artificial intelligence interpretation technology. In the future, with the continuous evolution of large model technology and the expansion of application scenarios, artificial intelligence interpretation technology is expected to play a more important role in cross language communication, international cooperation, and other aspects. However, attention should also be paid to the application limitations of large models and issues such as collaboration with human translators.

**Keywords:** Artificial Intelligence, Large-scale Language Models, Interpretation.

## I. INTRODUCTION

With the AI chat app Generative Pre-trained Transformer (Chat GPT) rapidly breaking through the market, from foreign companies such as Google, Microsoft, and NVIDIA to domestic companies such as Alibaba and Baidu, they are all sparing no effort in laying out large-scale language models. Large-scale language model has become a milestone technology for artificial intelligence to move towards universal intelligence; its emergence has led many industry insiders to believe that this technology will change the landscape of the information industry [1]. After the era of data based internet and computing power based cloud computing, it will enter the AI era based on large-scale language models.

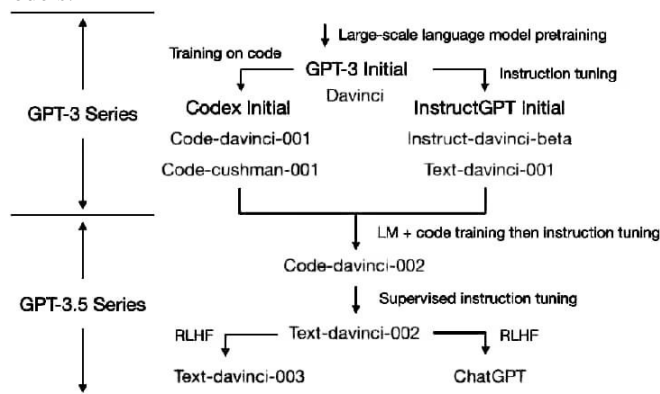


Figure 1: Introduction: Chat GPT Language Model

As one of the Large-scale language models Chat GPT’s introduction presented above in Figure 1, they are designed to understand and generate human-like text based on vast amounts of training data. They can be used for various tasks such as natural language processing, machine translation, sentiment analysis, and more. These models employ deep learning techniques, such as transformer architectures, to process and generate text.

AI technology has penetrated almost every aspect of society, and the field of interpretation is no exception. The development of AI has brought about an unprecedented revolution in interpretation technology, and the upstream

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and downstream application scenarios of the industrial chain are constantly innovating. Both domestic and foreign translation technology manufacturers regard machine translation as an entry point for AI technology, launching various forms of translation machines and apps. New application demands are rapidly exploding, and from the general public to professional conferences, they are constantly trying these new technologies.

## II. THE RISE OF LARGE-SCALE LANGUAGE MODELS AND THE DEVELOPMENT OF INTERPRETATION TECHNOLOGY

The rise of the large-scale language model has a positive impact on the development of interpretation technology. Firstly, interpreting process mainly involves converting oral expression from one language to another. The breakthroughs made by the large-scale language model in the field of natural language processing have enabled key tasks such as machine translation and speech recognition to achieve higher levels of performance [2]. By training massive neural network models, large-scale language models can learn richer and more accurate semantic information, and better understand and express the meaning between the source and target languages during the interpretation process.

Secondly, significant progress has been made in language modeling for large-scale language models, such as the GPT series models. These models can generate coherent and semantically consistent text, providing better reference and creative output for interpretation systems. By combining the language generation capabilities of large-scale language models with machine translation techniques, interpretation systems can perform oral translation more smoothly and better adapt to different contexts and cultural backgrounds while maintaining semantic accuracy.

In addition, the large-scale language model can also be applied in the fields of speech recognition and speech synthesis, providing a more complete solution for interpretation technology. By applying the large-scale language model to speech recognition, the interpretation system can improve its accurate recognition ability of input audio, thereby providing more accurate text input for subsequent translation processes. Using a large-scale language model for speech synthesis can make the interpretation results generated by the system more natural and fluent, improving the user experiences.

The rise of the large-scale language model has brought tremendous impetus to the development of interpretation technology [3]. By applying the semantic understanding, generation ability, and speech processing technology of large-scale language models, interpretation systems can achieve more accurate and fluent translation effects, providing convenience and support for cross language communication. However, we still need to continue researching and improving various technologies of the large-scale language model to meet the needs of interpretation technology in practical applications.

## III. THE APPLICATION OF LARGE-SCALE LANGUAGE MODELS IN AI INTERPRETATION TECHNOLOGY

Large-scale language models, such as Chat GPT and Baidu's Wenxin, have significant applications in AI interpretation technology. Here are a few key areas:

### A. *Speech Recognition*

Language models can enhance speech recognition systems by improving their ability to understand and transcribe spoken language accurately. With their deep understanding of grammar, context, and semantics, these models can aid in developing more sophisticated and efficient speech recognition algorithms. Speech recognition plays a significant role in AI interpretation technology. Here are some applications where speech recognition is applied:

- **Real-Time Transcription [4]:** Speech recognition technology can convert spoken language into written text in real-time. This transcription capability is particularly useful in scenarios like live events, lectures, conferences, or meetings, where immediate and accurate transcriptions are required.
- **Virtual Assistants:** Speech recognition is at the core of virtual assistant technologies like Siri, Google Assistant, or Amazon Alexa. These assistants can understand and respond to voice commands, allowing users to interact with their devices or perform tasks hands-free.
- **Voice Control:** Speech recognition enables the control of various devices, appliances, or systems using voice commands. From controlling smart homes, automobiles, or wearable devices, speech recognition provides a convenient and intuitive interaction modality.

- Dictation and Voice-to-Text: Speech recognition technology allows users to dictate text instead of typing, making it easier to compose emails, write documents, or input text in messaging applications. Voice-to-text capabilities are especially beneficial for individuals with disabilities or those who find typing cumbersome.
- Multilingual Voice Translation: Speech recognition combined with machine translation can facilitate real-time translation between different languages. Users can speak in their native language, and the system can transcribe and translate the speech into the desired target language, enabling cross-language communication.
- Call Center Automation: Speech recognition technology is employed in call centers to automate customer support processes. By converting spoken customer queries into text, the system can analyze and provide appropriate responses or route the call to the right department, reducing the need for manual intervention.
- Accessibility and Assistive Technologies: Speech recognition helps individuals with disabilities interact with digital devices and access information more easily. It enables hands-free operation, voice-controlled applications, and communication aids for people with speech impairments.
- Voice Analytics [5]: Speech recognition can be used to analyze and extract insights from audio data. This technology finds applications in areas like sentiment analysis, market research, voice-based biometrics, or fraud detection.

Through deep learning algorithm, large-scale language models achieve more accurate and faster speech recognition capabilities, thereby improving the reliability and real-time performance of interpretation intelligent technology. The model has made significant progress in speech recognition through deep learning algorithms. Traditional speech recognition systems are usually based on probability models and feature engineering, but their accuracy and real-time performance are limited to some extent. However, large-scale language models can automatically learn abstract representations of speech signals through deep neural network structures, thereby improving the accuracy of speech recognition.

Large-scale language models utilize large-scale training data and computing resources to learn richer and more accurate speech features. It can capture more details and speech changes, thereby improving the accuracy of speech recognition. In addition, the large-scale language model also has stronger generalization ability, which can handle speech input under complex conditions such as different accents, speech speed, and noise. In addition, the processing speed of the large-scale language model has also been greatly improved. Traditional speech recognition systems require a long processing time to recognize a large amount of speech data, while large-scale language models can achieve faster speech recognition speed through parallel computing and optimization algorithms, thereby improving the real-time and responsiveness of interpretation intelligent technology. The application of deep learning algorithms in the model has made significant progress in interpreting intelligent technology in speech recognition, improving reliability and real-time performance, and providing better interpreting experiences for interpreters and users.

Speech recognition technology continues to advance, benefiting from advancements in deep learning, natural language processing, and improved training datasets. Its applications are expanding and diversifying, empowering users with more efficient and intuitive ways to interact with machines and access information.

### *B. Natural Language Processing*

Natural Language Processing (NLP) [6] plays a crucial role in AI interpretation technology. Here are some applications of NLP in this field:

- Speech Recognition: NLP techniques are used to convert spoken language into written text. This enables AI interpretation systems to accurately transcribe and understand human speech.
- Language Translation: NLP algorithms are employed to translate one language into another. AI interpretation technology utilizes these algorithms to provide real-time translation services, facilitating communication between individuals who speak different languages.
- Sentiment Analysis: NLP models can analyze the sentiment expressed in texts or spoken language. In AI interpretation, sentiment analysis helps the system understand the emotions and intentions behind users' words, enabling it to respond appropriately.
- Contextual Understanding: NLP allows AI interpretation systems to comprehend the context in which a conversation is taking place. It helps the system interpret ambiguous statements and make more accurate responses based on the overall conversation context.
- Text Summarization: NLP algorithms can summarize lengthy texts into concise and coherent summaries. In AI interpretation, this capability can be used to extract key information from a conversation and provide a summary to the user.

- **Dialogue Management:** NLP techniques assist AI interpretation systems in managing dialogues effectively. They enable the system to maintain context, handle interruptions, and engage in multi-turn conversations, providing a seamless and natural conversational experience.
- **Named Entity Recognition:** NLP models can identify and extract named entities, such as names of people, organizations, locations, dates, etc., from texts or speech. This helps AI interpretation systems understand and accurately process specific information mentioned by the user.

The breakthrough of the large-scale language model in natural language processing has significantly improved translation quality, effectively solving the semantic understanding and expression problems in traditional machine translation. The breakthrough of the large-scale language model in natural language processing has brought significant improvements to translation quality, effectively solving the semantic understanding and expression problems existing in traditional machine translation.

Traditional machine translation systems are usually based on rules and statistical methods [7], and their translation quality is limited by semantic understanding and expression capabilities. However, large-scale language models can be trained using large-scale parallel corpus data through deep learning algorithms, thereby learning rich semantic representations. These large-scale language models have stronger semantic comprehension abilities, which can capture the correlation between words, phrases, and sentences, thus accurately understanding the meaning of input text.

In addition, the large-scale language model can also generate more accurate and natural translation results. Traditional machine translation systems have fixed patterns and limitations in language expression, resulting in translation results that are not smooth and natural enough. The large-scale language model can be optimized directly from input text to output translation results through end-to-end learning, thereby improving translation quality. It can generate expressions that are more in line with the target language habits and idioms, making the translation results more accurate and natural.

As NLP continues to advance, it will further enhance the accuracy, context comprehension, and naturalness of AI interpretation systems, making them even more effective in understanding and responding to human language.

### C. Machine Translation

Machine translation plays a crucial role in AI interpretation technology by facilitating communication between people who speak different languages. Here are some applications of machine translation in AI interpretation technology:

- **Real-time interpretation:** Machine translation algorithms can be used to instantly translate spoken language during conversations, enabling effective communication between individuals who don't speak the same language.
- **Multilingual virtual assistants:** Virtual assistants equipped with machine translation capabilities can provide support and assistance in multiple languages, catering to a diverse range of users worldwide.
- **Language learning:** Machine translation can assist language learners by providing accurate translations, helping them understand foreign texts and improve their language skills [8].
- **Cross-cultural collaborations:** Machine translation enables people from different cultures and language backgrounds to collaborate on projects, breaking down language barriers and fostering global cooperation.
- **Content localization:** Machine translation can be used to translate digital content, such as websites, apps, and video subtitles, to make them accessible to users in different languages and regions.
- **Multilingual customer support:** Machine translation can aid customer support services by automatically translating customer queries and responses in real-time, providing efficient and seamless communication between customers and support agents.
- **Conference interpretation:** Machine translation can be integrated into conference interpretation systems [9], allowing participants to receive real-time translations of speeches and discussions, overcoming language barriers at international events.

The large-scale language model has made significant breakthroughs in the field of machine translation, enabling intelligent interpreting technology to better meet the translation needs of multilingual and diverse texts. The large-scale language model has indeed made significant breakthroughs in the field of machine translation, enabling intelligent interpreting technology to better meet the translation needs of multilingual and diverse texts.

Traditional machine translation techniques face some challenges when dealing with multilingual and diverse texts, such as differences in language structure and grammar rules between different languages, as well as specialized terminology and specific expressions in different fields. These issues result in limited translation quality for traditional machine translation systems when dealing with multilingual and diverse texts.

However, by using large-scale language models, such as neural machine translation models based on deep learning, the above challenges can be overcome and better interpretation intelligence technologies can be achieved. Specifically, the large-scale language model utilizes large-scale parallel corpus data for training, which can learn rich semantic and language knowledge, thereby better understanding the differences and characteristics between different languages.

The large-scale language model can also adapt to the translation needs of different fields and text types. By introducing domain specific data and annotation information during the training process, large-scale language models can be better at handling domain specific terms and expressions. In this way, intelligent interpreting technology can provide more accurate and professional translation results when facing diverse texts in different fields. It's important to note that while machine translation has made significant advancements, it may still have limitations, particularly in preserving the nuances and context of human language. Human translation is still valuable in complex or sensitive situations where accurate and nuanced interpretation is essential.

Therefore, the breakthrough of the large-scale language model has brought tremendous progress to intelligent interpreting technology, enabling it to better respond to the translation needs of multilingual and diverse texts. This is of great significance for promoting cross language communication, enhancing the level of globalization development, and expanding international cooperation.

#### *D. Real-time Interaction*

Real-time interaction plays a crucial role in AI interpretation technology as it enhances the overall user experience and ensures efficient communication between humans and machines. Here are some key applications of real-time interaction in AI interpretation technology:

- **Language translation:** Real-time interaction allows AI interpretation systems to provide instant translation services, enabling people to communicate across different languages seamlessly. Users can input their text or speech, and the AI system will quickly translate it into the desired language in real-time.
- **Voice assistants:** Real-time interaction enables voice assistants like Siri, Alexa, or Google Assistant to understand and respond to user queries promptly. These assistants utilize natural language processing algorithms to interpret voice commands and provide relevant information or perform tasks in real-time.
- **Customer support:** Real-time interaction is widely used in customer support chat-bots that assist users in resolving their queries or issues. AI-powered chat-bots can engage in real-time conversations with customers, understanding their queries, and providing appropriate solutions instantly.
- **Virtual meetings and conferences:** Real-time interpretation technology allows for seamless communication in multilingual meetings and conferences. AI systems can translate speeches in real-time, enabling participants to understand and interact with each other without language barriers.
- **Language learning:** Real-time interaction enhances language learning experiences by providing instant feedback and corrections. AI-powered language learning platforms can evaluate learners' speech or writing in real-time, offering suggestions and guidance to improve proficiency.
- **Speech recognition:** Real-time interaction is fundamental in speech recognition applications like transcription services or voice-controlled devices. AI systems can convert spoken words into text in real-time, facilitating various tasks such as note-taking, dictation, or hands-free device control.
- **Intelligent personal assistants:** Real-time interaction enables intelligent personal assistants to understand and respond to user commands or requests promptly. These assistants can perform tasks like setting reminders, sending messages, playing music, or providing personalized recommendations in real-time.

The large-scale language model improves the accuracy and fluency of interpretation intelligence technology in real-time interactive scenarios through real-time learning and optimization algorithms, providing a better experience for cross language communication.

The large-scale language model has indeed improved the accuracy and fluency of interpretation intelligence technology in real-time interactive scenarios through real-time learning and optimization algorithms, providing a better experience for cross language communication.

In traditional machine translation technology, due to limited understanding of context and real-time processing capabilities, it is often unable to meet user needs in real-time interactive scenarios. For example, in interpreting conversations, speakers need to obtain accurate translation results in a timely manner, while also hoping that the translation results can be expressed more smoothly and naturally.

The large-scale language model continuously improves its translation quality and performance through real-time learning and optimization algorithms to meet the needs of real-time interaction scenarios. Specifically, large-

scale language models can provide real-time feedback and correction based on user input, thereby improving translation accuracy. At the same time, by introducing more contextual information and relevant contexts, the large-scale language model can generate smoother and more natural translation results, improving the user experience of interpretation intelligence technology in real-time interactive scenarios.

This ability to improve accuracy and fluency enables intelligent interpreting technology to better assist people in real-time dialogue and communication in cross language communication. Whether it will be business meetings, international conferences, or daily socializing, the advancement of the large-scale language model has provided a better experience for cross language communication, promoting globalization and co-operation and communication among countries.

It should be noted that although the large-scale language model has made significant breakthroughs in improving the accuracy and fluency of interpretation intelligence technology, there are still some challenges, such as domain specific translation needs, accent, dialect, and long sentence processing. Future research and development will continue to address these challenges and further enhance the performance of interpretation intelligence technology in real-time interactive scenarios.

Overall, real-time interaction plays a vital role in AI interpretation technology by facilitating instant communication, language translation, and personalized assistance. It enhances user experiences across various domains, making AI systems more versatile and accessible.

#### IV. CHALLENGES AND PROSPECTS OF AI INTERPRETATION TECHNOLOGY IN THE AGE OF LARGE-SCALE LANGUAGE MODELS

In the age of large-scale language models, AI interpretation technology faces both challenges and prospects.

##### A. Challenges

Data privacy and security are indeed important considerations when it comes to AI interpretation technology, especially in the age of large-scale language models. The model requires a large amount of data for training, and data privacy and security issues have become important issues that need to be urgently addressed in the current development of interpretation intelligence technology, while also facing multiple challenges:

###### 1) *Data quality and diversity*

Large-scale Language models require a large amount of high-quality data to train, but interpretation data is relatively limited, which brings some challenges to training Large-scale Language models in interpretation. In order to solve this problem, the following strategies can be adopted:

###### a) *Data collection and clean-up*

Collect and cleanse as much data as possible in the interpretation field. Real and high-quality interpretation data can be obtained through cooperation with professional translation agencies, language institutes, foreign ministries, etc. In addition, open text resources on the Internet, such as news reports, speeches, etc., can be used to expand the data in the field of interpretation.

###### b) *Data enhancement*

In cases where data is limited, data enhancement techniques can be used to augment the data set. Data enhancement technology can generate new virtual data by randomly replacing, rearranging and inserting existing data. This can increase the diversity of the data and improve the generalization ability of the translation model.

###### c) *Transfer learning of pre-trained models.*

Transfer learning can be done from Large-scale Language models in other related domains, pre-trained on other tasks and fine-tuned in the interpretation domain. In this way, the interpretation model can be improved with large-scale data from other fields, while reducing the dependence on interpretation data.

###### d) *Pretreatment technology*

A number of preprocessing techniques can be used to process data in the interpretation domain to increase diversity and richness. For example, word segmentation, part-of-speech tagging, and named entity recognition can be performed on the source language text to extract more language features. In addition, cross-lingual alignment techniques can be used to align data in the interpretation domain with data in other domains to increase the diversity of training data

In summary, by means of data collection, data augmentation, transfer learning, and preprocessing techniques, the problem of relatively limited data can be overcome in the field of interpretation, and the effectiveness and quality of translation models can be improved. It's important to note that while AI interpretation technology aims

to provide valuable assistance, users should also be mindful of sharing sensitive personal information or engaging in conversations that may compromise their privacy and security.

## 2) *Domain specific requirements*

Interpretation involves various fields, each with its own professional terminology and language style. For large-scale Language models, there may be some difficulties when facing translation needs in specific fields. This is because large-scale Language models typically learn language rules and patterns through a large amount of training data, but may not have sufficient mastery of certain domain specific terminology and industry background knowledge. To improve its specificity, the following methods can be considered:

### a) *Domain adaptation*

Targeted training of models for specific industries or fields to improve understanding and translation accuracy of terminology and language styles in that field. For example, conducting targeted training in the medical field can help the model better understand medical terminology and texts.

### b) *A dictionary of professional terms*

Establish a dictionary of professional terms in the field and use it in conjunction with the model to ensure accurate translation of professional terms. This can refer to the dictionary during the translation process, improving the accuracy and consistency of the translation.

### c) *Context understanding.*

For translation needs in specific fields, the model needs to have a certain level of contextual understanding ability. This can improve the model's ability to understand specific domain contexts through training on domain data, papers, and related literature.

### d) *Manual editing and proofreading.*

In specific interpreting tasks, manual editing and proofreading are introduced, and the results of AI translation are reviewed and revised based on the experience and knowledge of professionals to improve translation quality.

In summary, in response to the characteristics and needs of the interpretation field, combining methods such as domain adaptation, professional terminology dictionaries, contextual understanding, and manual editing can further improve the accuracy and professionalism of large-scale Language models in specific domain translations.

## 3) *Real-time and fluency*

Interpreting often takes place in real-time interactive situations, so it requires rapid response and fluent expression. Large-scale Language models still have challenges in dealing with long sentences, complex contexts and accents, and need to be further optimized to provide more accurate and fluent translation results. Interpreting is very important in real-time interactive scenarios, requiring rapid response and fluency. The large-scale Language model is indeed challenging in dealing with interpretation tasks. Long sentences, complex contexts, and accents can lead to inaccurate or in-fluent translations.

For long sentences and complex contexts, large-scale Language models may have difficulty understanding and accurately translating these sentences due to the flexibility and ambiguity of language. Current large-scale Language models need to be further optimized for complex contexts to provide more accurate and natural translation results.

As for the accent problem, there are various accent differences between different regions and people, which also pose challenges to the interpretation task. Large-scale Language models may not be able to accurately understand or recover accents.

In order to provide better interpretation services, we need to continuously improve and optimize the training methods of large-scale Language models, add more sample data of accents and contexts, and strengthen the understanding ability of models for different accents and complex contexts.

## 4) *Interpretability and confidence*

The large-scale Language model has strong generalization ability when dealing with complex tasks, that is, it can apply the learned knowledge to new and unprecedented situations. This is thanks to the large parameter space of the large-scale Language model, which can better capture complex patterns and patterns in the data. However, the complexity of its model structure also leads to insufficient interpretability and credibility, and further research needs to strengthen exploration in this area. It is precisely due to the complexity of large-scale Language models that their model structure becomes difficult to explain. Large-scale Language models typically consist of billions of parameters, which makes it difficult for us to intuitively understand how they make predictions or decisions.

Compared to traditional machine learning algorithms, the large-scale Language model is more like a black box, making it difficult to provide a clear explanation of the internal working mechanism.

In addition, due to the complexity of large-scale Language models, there are also concerns about their credibility. When there are so many parameters in the model, it is difficult to ensure that each parameter is correct and reliable. Even after extensive training and validation, there may still be some unpredictable issues in the model, leading to a decrease in the confidence of its output results.

To address these issues, researchers in related fields are strengthening their re-search on the interpretability and credibility of large-scale Language models. For example, some researchers are exploring how to explain the decision-making process of large-scale Language models through visualization methods to enhance their interpretability. At the same time, they are also considering how to design better evaluation indicators and validation methods to enhance the credibility of large-scale Language models.

The generalization ability of large-scale Language models is a powerful aspect, but their complexity also poses challenges to interpretability and credibility. Future re-search needs to further explore these issues to improve the interpretability and credibility of large-scale Language models in practical applications.

#### 5) *Multimodal fusion and human-computer interaction*

The development of large-scale Language models still requires further integration of multimodal information into intelligent interpreting technology to provide a richer interpreting service experience and further improve human-machine interaction methods. For example, in the interpretation process, a large-scale Language model can simultaneously process speech signals and image information. For speech signals, the model can be used for speech recognition to convert spoken language into text. For image information, the model can recognize and understand elements such as scenes and characters in the image. By integrating these different modalities of information, we can better understand and translate the interpretation content.

In addition, the fusion of multimodal information can further improve human-computer interaction methods. Traditional text input and output methods may have certain limitations in the interpretation process, while the fusion of multimodal information can communicate with people in a more intuitive and natural way. For example, interpreting results can be conveyed to users through methods such as images and sound, providing a richer interactive experience.

Certainly, integrating multimodal information into intelligent interpreting technology also faces some challenge, such as how to effectively process and integrate different types of information, and how to ensure translation accuracy and real-time performance. But these challenges are not insurmountable, and future research and development will further promote the innovation and application of interpretation intelligence technology. Multimodal fusion and human-computer interaction will also be a very promising and promising direction for development.

Despite the numerous challenges faced by AI interpretation technology, the prospects are still promising.

### B. *Prospects*

#### 1) *Language accessibility*

AI interpretation technology enables language accessibility by providing real-time translation and interpretation services. This facilitates communication and collaboration across diverse languages and cultures.

#### 2) *Knowledge discovery*

Large-scale language models can assist in knowledge discovery by quickly processing vast amounts of information. This helps users find relevant answers, insights, and resources more efficiently.

#### 3) *Personalized assistance*

AI interpretation technology has the potential to offer personalized assistance based on user preferences and needs. Tailored recommendations and suggestions enhance user experiences and address individual requirements.

#### 4) *Automation and efficiency*

With AI interpretation, repetitive tasks such as summarization, information extraction, or content generation can be automated. This saves time, improves efficiency, and enhances productivity.

#### 5) *Creativity and innovation*

Language models can serve as creative assistants, generating ideas, assisting in content creation, and supporting creative endeavors across various domains.

While the prospects of AI interpretation technology are promising, addressing challenges is crucial to ensure responsible and ethical deployment. Ongoing research and development efforts are necessary to harness the full potential of large-scale language models for interpretation purposes.



## V. CONCLUSIONS

By providing more accurate and fluent interpretation services and strong language processing capabilities, large language models not only improve the efficiency and convenience of interpretation, but also bring new development opportunities to the interpretation industry. However, we must also recognize that in the process of interpreting translation using large language models, human professional interpreters are still required to participate and supervise to ensure the accuracy and professionalism of the translation results. Only on the basis of the combination of artificial intelligence and human intelligence can we realize the intelligentization of interpretation in the true sense.

To sum up, the emergence of large language models has brought great changes to intelligent interpretation technology and has shown broad prospects for development. By improving translation quality, expanding language coverage, integrating other cutting-edge technologies and expanding application areas, the big language model will push interpretation intelligence technology to a higher level, provide users with better and more efficient interpretation services, and promote the development of global communication and cooperation. It is believed that with the continuous advancement of technology and the in-depth promotion of applications, the big language model will continue to lead the transformation of interpretation intelligence technology and provide higher levels of support for interpretation services.

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