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Research on Self-cognition of College Students in the Background of AI Language Model Use

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Abstract: This paper discusses the status and influencing factors of college students' self-cognition under the background of the use of artificial intelligence language model. A cross-sectional study design was used to survey college students from different specialties and ages, and questionnaire analysis was used for data analysis. The research results show that the use of AI language model by college students is generally with some uncertainty and dependence; the overall level of self-cognition is high, but there are some differences; the correlation between AI language model and self-cognition, and the influence factors include gender, major and age. This study is helpful to promote the self-cognition and development of college students, improve the application efficiency and popularity of AI language models, and its relationship can be further explored in the future.

Keywords: Artificial Intelligence; Language Model; College Students; Questionnaire Survey; Self-cognition.

1. Introduction

"Have you ever heard of a ChatGPT?" Artificial intelligence language model has been widely used and developed in recent years, among which the most representative one is the GPT model. The GPT model is an unsupervised natural language processing model that generates natural and flowing text by learning from large amounts of text data. ChatGPT Is an application of the GPT model in dialogue generation, which can generate reasonable responses according to the user's input and continuously optimize the quality of the responses. ChatGPT, it has a wide range of applications, including intelligent customer service, chatbot, voice assistant, etc., and has become an indispensable part of People's Daily life. However, as AI language models like ChatGPT become more applications, more and more people are starting to use them to solve various problems in life and work. The use of ChatGPT is also becoming increasingly common among college students. In study and life, ChatGPT can provide a lot of help for college students, such as: answering questions, auxiliary homework, entertainment and leisure, etc. However, there are also some potential problems in the use of ChatGPT, such as the impact on college students' language expression ability, thinking ability, learning ability and other aspects, which may affect the self-cognition status of college students, [1]. In this study, we will use the questionnaire method to collect data on the use of college students in the ChatGPT application and their self-awareness level. At the same time, in the process of data collection and processing, we will notice the standardization of data collection, the processing of missing values, the processing of abnormal values, etc., to ensure the validity and accuracy of the data [2]. In terms of data analysis, we will use statistical and machine learning methods to analyze the data to explore the influencing factors of ChatGPT on the self-cognition of college students.

2. Current Situation and Dilemma of Self-Cognition of College Students

Self-cognition is a person's cognition, understanding and evaluation of himself. It involves knowledge and reflection of one's external and internal characteristics, behaviors and attitudes. Self-cognition is crucial to human development and growth. It can not only promote individual mental health and happiness, but also promote individual self-development and career development. The college student stage is an important stage of self-cognition development. In college, college students face many new challenges and opportunities, such as social interaction, study, life and career. At the same time, college students are also gradually forming their own outlook on life, values and self-cognition. Therefore, it is of great significance to study the self-cognition status of college students to promote the comprehensive development and growth of college students. Although the research on the self-cognition of college students has been relatively deep at home and abroad, there are still the following problems:

1. The research on self-cognition among college students mainly focuses on traditional questionnaires and experimental research, with a lack of research methods based on real scenes and big data. Therefore, these findings may have some subjectivity and limitations.

2. At present, there are limited studies on the relationship between college students' self-cognition and artificial intelligence, especially in the application of artificial intelligence language model, and rarely [3]. The application of artificial intelligence language model has penetrated into our daily life and learning, such as intelligent customer service, intelligent translation, intelligent writing and so on. In these applications, the AI language model can not only provide convenient services, but also provide users with relevant knowledge and information, thus affecting the users' self-cognition. However, there are still many uncertainties about the influence mechanism of AI language model on the self-cognition of college students, which requires in-depth research.

Therefore, this study aims to explore the self-cognition status in the context of AI language model use and analyze the influence mechanism of AI language models on their self-cognition. This study will use the research method of data analysis to explore the self-cognition of college students in the background of ai language model in large samples, and

analyze the influence mechanism of AI language model on self-cognition of college students.

3. Questionnaire Model Construction About College Students' Self-Cognition

3.1. Questionnaire Survey Found

As an exploratory study, our research is mainly divided into two stages, the first is through the questionnaire to understand the use of college students of artificial intelligence language model, and then, on the basis of designing a questionnaire model construction, examining the use of artificial language intelligence model on college students' cognitive effect.

College students are a very broad group, including people from different countries, regions and cultural backgrounds. Therefore, the analysis of college students needs to take into account its diversity and complexity. Here are some prominent group characteristics of college students: They are usually young people between the ages of 18 and 25, At a critical stage of growth and development; College students usually have a high school education, And is receiving higher education, Its subject area and learning style may also vary according to the country, region and cultural background; College students are usually in a relatively weak economic stage, They may need loans or work to pay for tuition fees and daily living expenses; College students often establish extensive social networks both inside and outside the university, They may face social pressures and expectations from their families, friends and classmates; College students usually face many psychological pressures such as academic pressure, future uncertainty, interpersonal relationship problems and so on, This may affect their emotional and mental health. When analyzing this group of college students, we need to consider the interaction and influence between these factors, as well as the development characteristics and trends of college students in social, cultural, psychological and other aspects. In this way, we can better understand the needs, values and behavior patterns of college students, and make more accurate decisions for providing appropriate support and services.

Taking Anhui University of Finance and Economics as an example, a total of 312 valid questionnaires were collected and analyzed and sorted out the 312 valid questionnaires. According to the basic personal information of the respondents, the proportion of men (55.92%) was slightly higher than that of women (44.08%), and the educational background was higher, most of them between 22 and 25 years old (70.52%).

3.2. Empirical Analysis of the Questionnaire on the Self-Cognition of College Students

In this survey, college students' understanding of the artificial intelligence language model was analyzed from three aspects: their definition and understanding of the language model of artificial intelligence, whether they have relevant knowledge reserve and their views on popular views. As for the concept and cognition of the artificial intelligence language model, 70 percent of the respondents take the industrial intelligence language model as the main view. Secondly, the artificial intelligence language model is a highly intelligent computer program, with the general thinking ability of human beings, accounting for 33.3%. As for the question of whether college students have relevant knowledge reserve, 82.4% of college students have little but little knowledge reserve, which shows that their understanding of AI language model is generally obtained from some hot news, rather than reading relevant books and literature. As for the view that people will be replaced by robots, 67.53% of college students hold a positive view that it is difficult to replace humans with robots both now and in the future. In this survey, the study on the relationship between the major of the college students and the AI language model is mainly analyzed from three aspects: whether the major of the college students is related to the relevant knowledge of the AI language model; the view on whether the AI language model will affect their major; and what they learn, what they need, what they need, to establish a language model about artificial intelligence. As for whether their major involved the relevant knowledge of AI language model, most of the respondents did not, and 62.9% did not, which shows that in the current university professional course education, the learning of cutting-edge technology has not been launched. Sixty-seven percent of the impact of "smart languages" on the subject is positive. The results showed that 33.3% of the students did not respond to the findings, or responded slightly, while 9.4% were very responsive to the findings. It shows the influence of the AI language model in different disciplines, but the size of the influence is different. As for the need for learning AI language models, 78.8 percent of the students said they had recognized the impact of cutting-edge technology on their development.

4. Problems Existing in College Students' Self-cognition

4.1. The Definition of the AI Language Model is not Clear

The AI language model is a complex concept with multiple sub-domains and related technologies. Although the definition of AI language models has been relatively stable, the scope of its sub-fields and related technologies is expanding. Machine learning, natural language processing, computer vision and other technologies are important components of AI language models, but they are not the whole story of AI language models. Machine learning means that computers automatically extract rules and patterns to make correct decisions and actions in the future. Natural language processing is a technology to study how computers understand, generate and process human language, which mainly includes text processing, speech recognition, speech synthesis and other aspects. In addition, computer vision is a study of how to make computers to understand and understand images and videos, mainly including image recognition, target detection, scene understanding and other aspects. These technologies are all part of the AI language model, but different technologies involve different problems and methods [4].

Different AI language models also have a close connection and interaction. Machine learning and natural language processing technologies are often applied in text classification, information retrieval, machine translation and other applications, while computer vision and machine learning technologies can be combined in autonomous driving, intelligent monitoring and other fields. The crossover and integration of these technologies can not only improve the efficiency and accuracy of artificial intelligence language

model technology, but also expand its application scope and scenarios.

4.2. Insufficient Understanding of the Application of the AI Language Model

Although college students have a certain understanding of the concept of AI language model, only an understanding of the concept is not enough to grasp the whole picture of AI language model technology. In fact, artificial intelligence language model technology has been widely used in many fields, such as medical care, finance, military affairs, transportation, education and other fields. These applications not only affect our daily life, but also are profoundly changing all aspects of society.

Taking the medical field as an example, AI language model technology can be used in disease diagnosis, drug research and development, health management and other aspects. By analyzing a large amount of medical data, AI language model technology can help doctors improve their diagnostic accuracy and avoid misdiagnosis, missed diagnosis and other situations. In terms of drug development, AI language models can help scientists conduct molecular simulation and analysis to accelerate the process of new drug development. In terms of health management, AI language models can monitor the health status of the human body and provide targeted health advice to help people better manage their health. However, along with the widely used AI language model technology, it also brings some risks and challenges. In the medical field, artificial intelligence language model algorithm may cause misjudgment errors, leading to patients getting the wrong treatment plan. In the financial field, AI language model technology can be used in credit assessment and risk management, but it may also be attacked and abused by hackers, [5]. In the military field, AI language model technology can be used in combat command, uav monitoring and other aspects, but there may also be risk [6] such as uncontrollable military robots.

4.3. Insufficient Understanding of the Development Trend of AI Language Models

The AI language model is a computer technology that can simulate human intelligent behavior and self-learn and optimize through data and algorithms. In the past few years, the rapid development and widespread application of AI language model technology has attracted global attention. Although ai language model has been popularized as a subject on college campuses, many college students still have insufficient understanding of the development and application of AI language model technology, or just have a simple understanding of some of the latest technological progress, and lack of in-depth understanding and understanding of cutting-edge technologies. College students need to understand the frontier trend of the development of AI language model technology [7]. At present, artificial intelligence language model technology has been developed to a very high level, such as deep learning, machine learning and natural language processing technologies have been widely used in many fields. With the continuous improvement of computer hardware performance and the increasing amount of data, artificial intelligence language model technology will become more intelligent and complex. For example, deep learning can give machines better self-learning and optimization capabilities, thus enabling a higher level of AI language model behavior. At the same time, artificial intelligence language model technology will continue to develop [8] towards the direction of more common, more convenient and more intelligent.

4.4. Insufficient Awareness of the Ethical Issues of AI Language Models

With the rapid development of AI language model technology, more and more people begin to pay attention to the ethical issues brought about by AI language model. The widespread use of AI language model technology has had significant impacts on society, humans and individuals, and some of them may pose ethical problems, which also raises many concerns. A major ethical issue is whether AI language models should be given moral responsibility. If AI language models are given moral responsibility, then they will be able to make independent moral judgments and decisions, which are very important for the individual and the society as a whole. However, this may also pose some risks and challenges, as the design and execution of AI language model systems is heavily dependent on humans, which leads to some errors and errors. Therefore, people need to think seriously about how to determine the moral responsibility that the AI language model should assume, and how to ensure the proper behavior of the AI language model system. Secondly, whether robots will replace human work is also an important ethical issue. With the development of AI language models, many work can be automated or done by robots. This can lead to a large number of people losing job opportunities, with a significant impact on the individual and society as a whole. Therefore, one needs to think seriously about how to minimize these effects and ensure a harmonious coexistence between robots and humans [9]. Another ethical issue of great concern is how AI language models affect our privacy and data security. With the development of AI language model technology, more and more personal data is collected and stored, including our location, shopping records, social media activities, and so on. This data may be used for AD targeting, monitoring, and other purposes, which poses some potential risks to our privacy and security [10]. Therefore, people need to consider how to protect personal privacy and data security, while taking full advantage of the advantages of AI language model technology. The development of the AI language model also involves some philosophical issues, such as whether the AI language model has autonomous consciousness and self-consciousness. These questions may cause a rethink of the relationship between AI language models and humans, as well as a reunderstanding of the nature and meaning of humans themselves. Therefore, college students need to think deeply about these philosophical questions and explore the nature and value of AI language models. Overall, with the development of AI language model technology, ethical issues are getting increasing attention. College students need to think deeply about these issues, and put forward constructive opinions and suggestions, to ensure that the development of AI language model technology can be in line with the interests and values of human beings. This requires college students to have extensive knowledge, profound thinking ability and a comprehensive vision, in order to make wise decisions and contributions in this rapidly changing era.

5. Self-cognition Research Strategies to Improve the Use of AI Language Model among College Students

5.1. Value the Human Nature and Reduce the Dependence on Artificial Intelligence

In today's era of rapid development of information technology, the application of artificial intelligence has been deep into various fields, whether in work, study or entertainment, people more or less use artificial intelligence technology. Among them, the application of artificial intelligence language model has gradually become a part of People's Daily life. Today, chatbots have become the representative of intelligent customer service, intelligent assistant and other fields. Through natural language processing and generation technology, they can interact with people and realize the purpose of man-machine dialogue. However, in the process of using AI language models, we will also find that some people are too dependent on AI, or even unconsciously regard it as real dialogue partners, which is contrary to human self-cognition. Therefore, this paper puts forward the suggestion to reduce the dependence on artificial intelligence by emphasizing human nature, in order to help college students better use the AI language model and improve their self-cognition level.

We need to understand the concept of human nature. Human nature refers to the nature, quality and characteristics of human beings, and is the basis of human civilization and social development. Human nature is composed of thoughts, will, emotion and other factors, but also includes the understanding and understanding of the world. Although artificial intelligence can simulate human thinking and expression in some aspects, it lacks human emotion and self-awareness. Therefore, in the process of using artificial intelligence language model, we need to always remind ourselves that artificial intelligence is only a tool and cannot replace our thinking and decision-making. We need to recognize the limitations of the AI language model. Although current AI technologies have made great progress in natural language processing and generation, there are still some problems, such as less accurate semantic understanding and less natural dialogue processes. Therefore, when using the AI language model, we need to clearly recognize its limitations and avoid treating the AI answer as an absolute truth. For some questions involving morality, ethics, law and other fields, we need to be vigilant and do not easily believe the answers of artificial intelligence.

To sum up, attaching importance to human nature and reducing AI dependence is an important strategy to improve the self-cognition of college students' AI language model use. College students should have humanistic quality and a sense of social responsibility, understand the application and influence of artificial intelligence in society, and actively take measures to avoid and correct possible mistakes and prejudices. Only in this way can they more confidently and rationally use AI language models, and can also better contribute to social development and human welfare [11].

5.2. Improve Your Knowledge and Get Rid of the Mechanical Thinking Dilemma

In today's era, with the continuous development of science and technology, artificial intelligence technology has penetrated into every aspect of our daily life, and artificial intelligence language model has also become a part of our life. However, many college students may fall into a mechanical thinking dilemma when using AI language models, so that they cannot really understand and apply these models. Therefore, it is an important strategy to improve the knowledge of college students to improve their self-cognition and get rid of the AI language model.

College students need to have certain scientific and technological knowledge and skills in order to better understand and use AI language models. They need to understand the basic concepts and principles of AI technology, learn some basic programming and data analysis techniques, and understand the application and development of AI language models in various fields. These knowledge and skills can not only help them better understand and use the AI language model, but also improve their technical literacy and innovation ability, laying a good foundation for their future career development. College students need to get rid of the dilemma of mechanical thinking and cultivate critical thinking and creative thinking. Although artificial intelligence language model can help college students quickly generate text or solve some problems, it is still a tool, rather than a tool for human thinking. Therefore, college students need to learn to use the AI language model to assist their thinking, rather than relying entirely on it. When using AI language models, college students should always maintain critical thinking, evaluate and analyze the results of the model, and put forward their own opinions and opinions. In addition, college students should also develop creative thinking that allows them to create better AI language models and apply them in real life and work. College students need to pay attention to practice and experience accumulation. The use of artificial intelligence language model requires a certain amount of practical experience and skills. Only through continuous practice and exploration can we gradually get rid of the dilemma of mechanical thinking and master more advanced skills and applications. Therefore, college students should actively participate in the practical courses and extracurricular activities of AI language models to improve their programming skills and practical ability, so as to deepen their understanding and cognition of AI language models.

In addition, college students can exercise their practical skills by participating in some AI-related competitions or open-source projects. For example, you can participate in natural language processing competitions, such as the CCF competition in China, Tsinghua University's "Language and Intelligent Technology Competition" and so on. These competitions can not only provide practical opportunities, but also make friends with people in the industry and build social networks in the field of artificial intelligence, laying a solid foundation for future development. In addition to competitions, open-source projects are also a good way to improve their practical skills. At present, there are a large number of AI language model-related projects in the open-source community, such as TensorFlow, PyTorch, etc., which are very excellent open-source projects. Joining these open-source projects and participating in the development work can enable college students to have a deeper understanding of the implementation principle of the AI language model, improve their practical ability, so as to better understand and use the AI language model. In short, through

5.3. Deepen the Atmosphere and Weaken the Program Use Momentum

In today's society, programs have penetrated into every aspect of people's lives, and people are increasingly inseparable from a variety of software and applications. However, the widespread use of AI language models also brings us some challenges and risks, because it is easy for people to rely too much on procedures and ignore their thinking and judgment skills. Therefore, in order to improve the self-perception of college students using AI language models, we need to deepen the atmosphere and weaken the momentum of program use. We can reduce our reliance on programs by guiding students to use traditional tools such as handwritten notes. Handwritten notes can improve students' attention and thinking depth, promote the internalization and understanding of knowledge, and also help students to form their own knowledge system, so as to avoid over-reliance on procedures. In addition, the school can organize some offline communication activities to encourage students to discuss and think face to face, deepen mutual communication, and improve students' speculative and logical ability. By guiding students to read deeply and think deeply, to improve their cognition and understanding of the program. Deep reading can help students to have a deeper understanding of the principles and operation mechanism of programs, so as to better master their use methods and skills. In addition, schools can encourage students to participate in some academic discussions and research projects related to procedures to improve their program cognition and comprehension. We can guide students to view procedures from multiple perspectives to avoid excessive reliance on a single procedure. Students can take courses in different fields to learn about the knowledge and skills in different fields to better apply the AI language model. In addition, schools can also carry out some interdisciplinary courses and programs to allow students to deeply understand the application and operation of programs from multiple disciplinary perspectives. We can encourage students to use some non-procedural tools to assist in learning and work to reduce their dependence on programs. For example, students can use handwritten notes, oral notes and other methods to record and sort out learning content, use time management tools to improve learning efficiency, and use mind mapping and other tools to sort out and summarize knowledge points. By using these non-procedural tools, students can better maintain clear thinking and judgment and avoid over-reliance on procedural [12]. Deepening the atmosphere and weakening the momentum of program use is one of the important ways to improve the self-cognition of the use of AI language model. Strengthening students 'understanding and understanding of AI and guiding them to correctly use AI language model can not only help to improve the quality and accuracy of AI language model, but also cultivate students' innovative consciousness and thinking ability, laying a solid foundation for future development.

6. Conclusion

With the rapid development and application of AI technology, AI language model has become an indispensable tool in the study, life and work of college students. However, we must also see that in the process of using the AI language model, there are some problems in the self-cognitive ability of college students. This paper discusses on this problem. In addition, because the use of artificial intelligence language model can greatly improve the efficiency of work and learning, sometimes it will also lead to some college students' over-dependence on programs, forming a "programmed" way of thinking. To solve these problems, four countermeasures are proposed. In short, when using the AI language model, college students need to strengthen their self-cognition, recognize their own limitations and deficiencies, so as to better play the role of artificial intelligence technology. At the same time, we also need to pay attention to the thinking and evaluation of technology, maintain a critical attitude, and constantly explore new application areas, so that artificial intelligence technology can better serve our lives.

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