

Artificial Intelligence-driven Personalized Advertising Teaching Strategy

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Abstract: This paper discusses the application of artificial intelligence in personalized advertising teaching strategy. Traditional advertising teaching often cannot meet the individual needs of students, but through the use of artificial intelligence technology, students' personalized characteristics and learning data can be collected and analyzed, and customized advertising teaching content and recommendations can be provided for each student. This personalized teaching strategy can improve students' learning interest and participation, and achieve more effective education results. This paper mainly studies the framework design of personalized advertising teaching, student characteristics analysis and model building, advertising content generation and recommendation algorithms, and system implementation and evaluation. These studies provide new ideas and methods for personalized advertising teaching and have positive significance for improving the quality of advertising teaching.

Keywords: Artificial intelligence; Personalization; Advertisement; Tactics

1. Introduction

Advertising teaching is of great significance in the field of education today. Through advertising teaching, students can understand the basic principles and skills of the advertising industry, cultivate creative thinking ability and marketing strategies, and improve their competitiveness in the advertising industry. However, there are some limitations in traditional advertising teaching.

2. The concept and importance of personalized advertising teaching

Personalized advertising teaching refers to providing customized advertising teaching content and teaching methods for each student based on the characteristics and needs of individual students. Personalized advertising teaching emphasizes student-centered teaching, pays attention to students' interest, learning style and ability level, and provides targeted teaching support to improve students' learning effect and participation.

The importance of personalized advertising teaching lies in the ability to better meet students' learning needs and interests, and improve their learning motivation and enthusiasm. Through personalized teaching strategies, students are able to more deeply understand and apply advertising related knowledge and skills to improve their competitiveness in the advertising industry.

3. Personalized advertising teaching system framework design

3.1 System Architecture and Key Components

The framework design of personalized advertising teaching system mainly includes the following key components: First, data collection components. Responsible for the collection of students' personal data, including learning behavior, interests, learning ability, etc. Data can be obtained through learning management systems, questionnaires, and user behavior analysis. Second, the student characteristic analysis component. The collected student data is analyzed and modeled to extract the individual characteristics and needs of students. This can include characteristics such as learning style, learning goals, subject interests, etc. Third, the advertising content generation component. Based on the characteristics and needs of students, artificial intelligence technology is used to generate personalized advertising teaching content. This can include creative thinking training, advertising case studies, advertising design, etc. Fourth, the advertising recommendation algorithm component. According to the characteristics and needs of students, the recommendation algorithm is used to recommend the personalized advertising teaching content to students. The

recommendation algorithm can make recommendations according to the similarity of students' interests, the matching degree of learning goals and other indicators.

3.2 Data collection and processing process

Data collection and processing is a key step in a personalized advertising teaching system. The process includes the following steps: First, data collection. Collect personal data of students through learning management system, questionnaire survey or other means, including learning behavior, interests, learning ability and other aspects of data. Second, data cleansing and integration. The collected student data is cleaned and integrated, outliers and noise data are removed, and data from different sources are integrated for subsequent analysis and modeling use. Third, data analysis and feature extraction. The integrated student data is analyzed to extract the individual characteristics and needs of students. This can be achieved through methods such as data mining and machine learning.

4. Student characteristics analysis and modeling

4.1 Research on analytical methods of learning ability and learning style

Learning ability and learning style are important characteristics of students in personalized advertising teaching. In order to analyze students' learning ability and learning style, the following methods can be adopted: First, learning ability analysis. Students' learning ability can be evaluated by their academic performance, homework completion, classroom performance and other indicators. At the same time, machine learning and data mining methods can be applied to analyze students' learning data and extract the characteristics of learning ability. Second, the study of learning style. Learning style relates to students' behavioral preferences and ways in the learning process. Students' learning style can be understood through questionnaire survey, observation or analysis of learning behavior. At the same time, the methods of machine learning and data mining can also be applied to analyze the learning behavior data of students and extract the characteristics of learning style.

4.2 Student feature modeling technology based on learning history

Learning history is an important source of information for analyzing student characteristics. By analyzing students' learning history data, students' characteristics can be modeled. The following are some commonly used student feature modeling techniques: First, learning trajectory analysis. By analyzing the behavioral data of students at different learning stages, such as course selection, content browsing, teaching resource use, etc., students' learning interests and subject preferences can be inferred. Second, recessive factor analysis. By applying methods such as latent semantic analysis or topic models, students' learning history data is mapped into the recessive factor space to discover latent interests and subject preferences. Third, student feature modeling based on classifier. By using machine learning algorithms, such as decision trees, support vector machines, etc., students' learning history data is mapped to feature space, so as to infer characteristics such as students' learning ability and learning style.

5. Advertising content generation and recommendation algorithm

5.1 Establishment and management of advertising database

An advertising library is a database that stores advertising materials and content. In the personalized advertising teaching system, it is very important to establish and manage the advertising database. Here are a few key steps to build and manage an AD library: First, advertising material collection. Collect all kinds of advertising materials, including text, pictures, videos and other forms of content. Second, label and classify. Label and classify the advertising materials, so as to match and recommend them according to the characteristics of students in the future. Third, content management system. Establish a content management system to organize and manage advertising materials, and provide search and filtering functions to facilitate teachers and students to find and choose suitable advertising content.

5.2 Advertising content generation algorithm based on student characteristics

The advertising content generation algorithm based on the characteristics of students can generate personalized advertising teaching content according to the characteristics and needs of students. The following are some commonly used algorithms and methods: First, content matching algorithm. According to students' learning style, learning ability and other characteristics, the corresponding advertising materials are matched with students to generate advertising content that meets the needs of students. Second, generation algorithm based on recommendation system. Using the recommendation system technology, according to the interests and subject preferences of students, recommend the corresponding advertising content. Third, generate the model. Use machine learning or deep learning models to generate personalized AD content by learning the associations between student characteristics and AD material.

6. Discussion and outlook

6.1 Analysis of experimental results and discussion of influencing factors

When analyzing the experimental results, it is necessary to consider the influence of several factors on the personalized advertising teaching system. The following is a discussion of some possible influencing factors: First, student characteristics. Students' learning ability, learning style, interest and other characteristics have an important effect on the system. Different student characteristics may lead to different teaching effects and user satisfaction. Second, advertising content generation and recommendation algorithm. The accuracy and personalization of advertising content generation and recommendation algorithm play an important role in the system effect. The improvement and optimization of the algorithm may improve the performance of the system. Third, the way of implementation. The implementation method and environment of the system will also affect the user experience and teaching effect. Therefore, the selection and adjustment of implementation strategies should also be included in the discussion.

6.2 System Limitations and future improvement directions

Personalized advertising teaching system may have some limitations, need to be improved and perfected. Here are some possible limitations and directions for improvement: First, data collection and privacy issues. Personalized AD teaching systems need to collect and analyze student data, but there are challenges in data privacy security and compliance. In the future, data protection measures can be strengthened and relevant privacy regulations can be complied with. Second, the improvement of algorithms and models. There is still room for improvement in the accuracy and effectiveness of personalized AD generation and recommendation algorithms. In the future, the algorithm can be further studied and improved to improve the personalized degree and recommendation accuracy of the system. Third, the match between the needs of teachers and students. The goal of the system is to provide personalized advertising teaching content, but the needs of teachers and students may be different. In the future, the participation and feedback of teachers and students can be strengthened and optimized in terms of needs matching.

6.3 Outlook on educational practice and future development

Personalized advertising teaching system is of great significance in educational practice and has a broad prospect of future development. Here are some prospects: First, provide personalized learning experiences. Personalized advertising teaching system can provide personalized learning experience and teaching content according to the needs and characteristics of students, to help students learn more efficiently and improve their performance. Second, explore in-depth personalized education. In the future, technologies such as deep learning and natural language processing can be further studied and applied to achieve deeper personalized education and accurately match students' needs. Third, intelligent coaching and feedback. The personalized advertising teaching system can also be used as an intelligent tool to assist teaching, providing instant feedback and personalized tutoring to help students overcome learning difficulties and improve their autonomous learning ability.

As an innovative application in the field of educational technology, personalized advertising teaching system will continue to develop and evolve, and bring more opportunities and challenges to educational practice. With the continuous progress of technology and the continuous advancement of education concepts, personalized advertising teaching system is expected to play a greater role in the future.

7. Conclusions

Through continuous research and improvement, the personalized advertising teaching system will continue to improve, play a greater role in educational practice, and provide better learning experience and teaching effect. Future research can further expand the field of personalized education and explore the potential and application value of personalized advertising teaching.

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