

# Artificial intelligence and its impact on the study abroad industry

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**Abstract.** Artificial intelligence has played an important role in the overseas study industry. It provides students with more convenient ways to inquire and apply for overseas study information, and helps students to better choose their study abroad goals and schools through intelligent recommendation systems and personalized counseling services. At the same time, artificial intelligence is also applied to language learning and document writing, providing more efficient learning tools and writing AIDS. However, AI also presents some challenges, such as information security and privacy protection issues, as well as vicarious impacts on human professional advisors.

**Keywords:** Artificial Intelligence, Study Abroad Industry, Information Inquiry, Recommendation System.

## 1. Introduction

Artificial Intelligence (AI) is a computer science technology that simulates and implements human intelligence. It uses algorithms and large-scale data to model human cognition, learning, reasoning, and problem solving abilities in order to autonomously perform various tasks. The study abroad industry refers to the process and related services by which students choose to study abroad and obtain a degree. In the past, applying to study abroad often required students to manually search for information, write essays, and communicate with advisers [1]. However, with the development of artificial intelligence technology, the study abroad industry has also undergone revolutionary changes. Artificial intelligence plays an important role in the overseas study industry. Through the intelligent recommendation system and personalized counseling services, it provides students with more convenient ways to inquire and apply for overseas study information. Students can get accurate study abroad recommendation results according to their needs and conditions, saving time and energy. In addition, artificial intelligence also plays a role in language learning and essay writing, providing more efficient learning tools and writing AIDS to help students improve their language skills and essay expression. However, AI also faces some challenges in the overseas study industry. One of them is the issue of information security and privacy protection, as students need to provide personal sensitive information when using AI services. Protecting students' privacy and data security is Paramount. Another challenge is the vicarious impact of AI on traditional professional advisers. While AI can provide efficient recommendation and coaching services, for some complex situations and individual needs, the experience and human touch of a human professional adviser is still indispensable [2]. All in all, artificial intelligence has great potential and influence in the study abroad industry. It provides

students with more convenient and personalized study abroad services, but at the same time, it also needs to pay attention to information security and privacy protection, and balance the collaboration of artificial intelligence and human professional advisers [3].

## **2. Application of artificial intelligence in the overseas study industry**

### *2.1. Admissions and application process*

#### *2.1.1. Automated enrollment process*

One of the applications of AI in the overseas study industry is to automate the admissions process. The traditional study abroad admissions process often requires tedious communication and manual processing between the school and the applicant, involving a large number of documents and information exchanges. Through the introduction of artificial intelligence technology, the enrollment process can be automated and intelligent, improve efficiency and accuracy.

Specifically, AI can be applied to the admissions process for studying abroad in the following ways:

1. Automated screening and matching: Schools can use artificial intelligence technology to analyze and process application materials and quickly screen out qualified applicants. By building intelligent matching algorithms, applicants can be more precisely matched with schools and programs that fit their backgrounds and goals.

2. Language and academic assessment: Artificial intelligence can apply speech recognition and natural language processing technology to assess the language level and academic ability of applicants. This can reduce the time and cost of manual evaluation and provide objective and impartial evaluation results.

3. Intelligent recommendation system: Based on students' interests, backgrounds and goals, artificial intelligence can recommend students to study abroad programs, schools and countries that are most suitable for them. By analyzing a large amount of study abroad data and student feedback, the intelligent recommendation system can provide personalized recommendations to help students make more informed choices.

4. Automated document processing: Artificial intelligence can automatically process documents, transcripts, letters of recommendation and other documents in application materials. Through image recognition and text analysis technology, key information in documents can be extracted and organized, simplifying the application processing process.

5. Chatbots and virtual assistants: AI can communicate with applicants in real time via chatbots or virtual assistants, answering frequently asked questions, providing guidance and advice. This instant interaction helps applicants get immediate support and answers to questions.

By introducing AI technology, the study abroad industry can automate and intelligentize the admissions process, improving the efficiency and experience between schools and applicants. But at the same time, attention needs to be paid to protecting the privacy and data security of applicants, and ensuring the fairness and transparency of AI technology [4].

#### *2.1.2. Prepare AI-assisted application materials*

Another area of application for AI in the study abroad industry is to assist with application material preparation. Application materials are very important to study abroad applicants, they not only affect the applicant's chances of admission, but also reflect the applicant's personal characteristics and abilities. Ai can provide the following assistance to optimize the preparation process of application materials:

1. Essay writing assistance: Artificial intelligence can analyze a large number of successful application essays and use natural language processing technology to provide applicants with targeted writing suggestions. It can help applicants improve their essays by checking for grammatical errors, suggesting vocabulary replacements and sentence structure changes.

2. Essay style and content optimization: AI can analyze and optimize the essay style and content according to the applicant's personal information and the requirements of the target school. It can provide suggestions for key words and phrases to help applicants better express their motivations, experiences and goals.

3. Automated translation: Translating application materials can be a challenge for non-native English speakers. Artificial intelligence can use machine translation technology to translate application materials from the original language into the target language and provide further grammar and vocabulary correction suggestions [5].

### *2.1.3. Smart school matching recommendation*

One of the applications of artificial intelligence in the study abroad industry is smart school matching recommendation. The traditional school search and selection process often requires students to manually navigate through large amounts of school information, rankings, and reviews, which can be time and energy consuming. Through the introduction of artificial intelligence technology, intelligent school matching and recommendation can be achieved to help students find their study abroad goals more quickly and accurately.

Specifically, AI can be applied in school matching recommendations for study abroad in the following ways:

1. Analysis of students' personal characteristics: Artificial intelligence can establish a model of students' personal characteristics by analyzing students' interests, backgrounds, grades and goals. Through deep learning and data analysis, students' preferences and needs can be more fully understood.

2. Precise school matching: Based on students' personal characteristics and goals, artificial intelligence can match with the school database to accurately screen out schools that meet students' needs. This includes the matching of the school's academic atmosphere, professional setting, employment prospects, geographical location and other factors.

3. Personalized recommendation results: Artificial intelligence can generate personalized school recommendation results according to students' personal characteristics and needs. This can be achieved through machine learning algorithms and recommendation systems that recommend schools that best match students' interests and goals.

## *2.2. Student Services and support*

### *2.2.1. Virtual Assistant and Chatbot*

Another application of AI in the study abroad industry is virtual assistants and chatbots. These intelligent tools can communicate with students in real time through natural language processing and machine learning technologies, providing immediate support, guidance, and answers to questions.

Here are the applications of artificial intelligence to virtual assistants and chatbots in the study abroad industry:

1. Information inquiry and navigation: Virtual assistants and chatbots can provide comprehensive information inquiry and navigation services during study abroad. Students can communicate with them to get detailed information about schools, majors, application requirements, immigration policies, and more.

2. Counseling and guidance: Virtual assistants and chatbots can answer students' frequently asked questions and provide personalized counseling and guidance. They can give targeted advice based on the student's background and needs to help students make more informed decisions.

3. Application Preparation support: Virtual assistants and chatbots can provide support for students in preparing application materials. They can help students submit their applications on time and accurately by providing guidance on writing essays, reminding them of submission deadlines, and checking the completeness of application materials.

### 2.2.2. *Personalized academic and life advice*

Another application of AI in the study-abroad industry is to provide personalized academic and life advice. Overseas students face a variety of challenges, including academic difficulties and adapting to new environments and cultures. AI can provide customized advice and support to students by analyzing their individual characteristics, needs, and feedback.

Here are the applications of AI to personalize academic and life advice in the study abroad industry:

1. Academic tutoring and learning support: AI can provide targeted academic tutoring and learning support based on students' learning history and interests. It can recommend relevant learning resources, courses and answer academic questions to help students overcome learning challenges.

2. Course selection and course planning advice: Based on students' academic background and interests, AI can provide personalized course selection and course planning advice. It can analyze students' academic needs and academic goals, recommend the most appropriate combination of courses for them, and help them rationally arrange their study plans.

3. Acculturation and life guidance: Living abroad, students may face cultural differences and adjustment issues. AI can provide guidance and advice on local culture, social etiquette, life skills and more to help students better adapt to the new environment.

4. Mental health support: International students may face pressure and confusion from studies, life and interpersonal relationships.

### 2.2.3. *Intelligent tutors and academic guidance*

One of the applications of AI in the study abroad industry is intelligent tutors and academic guidance. Traditional academic guidance often relies on the experience and knowledge of human tutors, but in a large-scale study-abroad market, human resources are limited and the needs of each student are not the same. Artificial intelligence can provide intelligent tutor and academic tutoring services to meet students' personalized academic needs.

The following are the applications of artificial intelligence to intelligent tutors and academic guidance in the study abroad industry:

1. Personalized academic guidance: AI can provide students with personalized academic guidance based on their learning history, interests, and goals. It can analyze students' weaknesses and needs, provide subject-specific explanations, exercises, and textbook recommendations to help students bridge knowledge gaps.

2. Learning plan and progress management: AI can develop learning plans and progress management strategies for students according to their academic goals and time arrangements. It can remind students of important tasks and deadlines, help them organize their study time properly and keep learning motivation.

3. Course selection and planning: Based on students' major choices and interests, AI can provide advice on course selection and planning. It can analyze students' academic needs and employment prospects, and recommend suitable course combinations and professional directions for them.

## **3. The impact of artificial intelligence on the overseas study industry**

### 3.1. *Improve efficiency and reduce labor costs*

One of the impacts of artificial intelligence on the overseas study industry is to improve efficiency and reduce labor costs. By introducing artificial intelligence technology, many tedious tasks can be automated and intelligent, improving processing speed and accuracy, thereby saving time and resources.

The following are the specific impacts of artificial intelligence on improving efficiency and reducing labor costs in the overseas study industry:

1. Automated application process: Artificial intelligence can automatically process application materials, such as paperwork, transcripts, letters of recommendation, etc. It can identify, organize and

store key information in application materials, reduce manual operations and errors, and greatly improve the efficiency of the application process.

2. Smart School Matching and recommendation: By analyzing students' personal characteristics and needs, AI can intelligently match students with schools and majors that are right for them. This reduces the time and effort for students to manually search and compare schools, providing more accurate and efficient school recommendations.

3. Chatbots and virtual assistants: AI-powered chatbots and virtual assistants can provide real-time support, answer questions and guidance. They can answer students' common questions and provide personalized solutions, reducing the input of human consultants and saving time and labor costs.

### *3.2. Provide personalized support and services*

One of the impacts of AI on the study abroad industry is the provision of personalized support and services. By analyzing students' needs, interests, and backgrounds, AI can provide more personalized and precise support with personalized advice and tutoring tailored to each student.

Here are the specific impacts of AI on the personalized support and services provided by the study abroad industry:

1. Personalized school matching and major recommendations: By analyzing a student's interests, academic background, and goals, AI can intelligently recommend schools and majors that are the best fit for the student. It can provide needs-based assessment and advice to help students better Orient their study abroad goals.

2. Academic tutoring and guidance: AI can provide students with personalized academic tutoring and guidance. It can provide targeted learning resources, practice questions and solutions based on students' learning history and needs to help students bridge knowledge gaps and improve academic ability.

3. Essay writing and revision assistance: Application essays are a very important part of the study abroad application process. Artificial intelligence can provide students with personalized essay writing and revision assistance through grammar checking, sentence rewriting and content optimization, so as to enhance the quality and attractiveness of the essay.

By providing personalized support and services, AI helps students better meet their individual needs and goals, enhancing the study abroad experience and success rate. However, students still need to maintain active learning and thinking skills, and combine AI technology with human advisors to get more comprehensive support and guidance. At the same time, privacy and data security also need to be adequately protected to ensure that students' personal information is not misused or leaked.

### *3.3. Strengthen data-driven decision making and decision accuracy*

One of the impacts of AI on the study abroad industry is to enhance data-driven decision-making and improve the accuracy of decision making. By analyzing large amounts of study abroad data and student information, AI can provide accurate data support to help decision makers make more informed and scientific decisions.

Here are the specific impacts of AI on enhancing data-driven decision-making and decision accuracy in the study abroad industry:

1. Data analysis and prediction: Artificial intelligence can analyze a large amount of overseas study data, including student information, application materials, admission results, etc., to predict students' admission opportunities and success rates. It can use modeling and algorithms to provide students with personalized study abroad recommendations and help decision makers understand market trends and changes in demand.

2. School ranking and evaluation: AI can rank and evaluate schools based on rich school data and evaluation indicators. It can take into account a number of factors, such as academic reputation, employment rate, alumni network, etc., in order to provide an objective and comprehensive assessment of the school results to provide a decision basis for students and decision makers.

3. Risk assessment and management: Study abroad decision-making involves various risks and uncertainties. Through analysis and simulation, artificial intelligence can assess the degree of risk in overseas study decisions and provide corresponding management strategies and recommendations. This helps to reduce blindness and errors in decision-making and improve the accuracy and success rate of decision-making.

By enhancing data-driven decision making and improving the accuracy of decision making, AI changes the traditional decision-making method that relies on experience and subjective judgment. However, when applying artificial intelligence technology, it is still necessary to pay attention to the quality of data and privacy protection to ensure the fairness and reliability of decisions. At the same time, the experience and judgment of human professional advisors remain indispensable and need to be combined with AI technology to provide comprehensive and integrated decision support.

#### 4. Conclusions

The impact of artificial intelligence on the study abroad industry is profound and diverse. It brings many opportunities and benefits for students, policy makers and service providers, as well as some challenges. First, AI provides personalized support and services in the study abroad industry. By analyzing student data and needs, AI can recommend suitable study abroad goals, programs and schools, and provide customized academic and life advice. This helps improve student satisfaction and success rates. Second, AI improves efficiency and reduces labor costs. However, AI also faces some challenges in the overseas study industry. One of the most important issues is information security and privacy protection. Large amounts of personal data and sensitive information are used to train and run AI systems, which requires ensuring the security and privacy of the data and preventing leakage and misuse. In addition, the development of artificial intelligence has had a vicarious impact on the role of the traditional professional advisor. To sum up, artificial intelligence has a significant impact on the overseas study industry. It enhances data-driven decision making and decision accuracy, provides personalized support and services, and presents some challenges. When applying artificial intelligence technology, it is necessary to balance data use and privacy protection, and give full play to the advantages of artificial intelligence and human professional advisers to provide better study abroad experience and results.

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