Artificial intelligence and new media: The future of integrated development

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Abstract. With the rapid development of technology, the combination of artificial intelligence (AI) and new media is changing the way we obtain and disseminate information. AI is playing an increasingly important role in news production, content recommendation, social media analysis, false information identification, image and video content understanding, user behavior prediction, and innovative applications of robots in news media. This article will discuss in detail the integration of AI and new media, and the impact of this integration on our society.

Keywords: artificial intelligence, new media, development

1. Introduction: The application of artificial intelligence in news production

Artificial intelligence has been widely used in news production, including data reporting, story writing, voice broadcasting and so on. Here are some of the common applications:

1.1 Data Reporting in artificial intelligence

The AI can quickly generate data reports and statistical tables by analyzing large amounts of data. For example, some financial and sports news organizations use the AI to generate market reports and match statistics. In the era of digital information explosion, a huge and even difficult data scale is produced every day. Data has penetrated into all walks of life and become an important factor of production. New media is the beneficiary of the era of "big data", and data is a great advantage of new media. Every link such as data collection, managing data, analyzing data and using data can be used for new media and generate considerable revenue. However, the producers and audiences of new media content are both "people",

while people are not good at processing these complex and tedious data, so they leave this work to artificial intelligence to assist and quickly adapt to all kinds of related work. However, data is the key and the most important element of artificial intelligence. The quantity and quality of data determine the development level of artificial intelligence. In general, the more data you have, the more efficient the neural network of new media communication is. Artificial intelligence helps new media people to process data, and at the same time, the large amount of data generated by new media leads the further growth of artificial intelligence in this environment, and then promotes the continuous development of new media itself.

1.2 Story writing in artificial intelligence

The AI can quickly generate news stories based on existing materials and templates. For example, in some emergency reports, AI can quickly generate preliminary news reports, so that news information can achieve more efficient and rapid dissemination.

1.3 Voice broadcast in artificial intelligence

AI can use speech synthesis technology to transform text into speech and broadcast news. For example, some smart speakers and mobile APP provide voice broadcasting function, and some map navigation software to meet the needs of users. Speech and image recognition is equivalent to artificial intelligence simulation of human hearing, visual and basic language ability, new media development to now no longer stay in the graphic level, more and more video audio become the main force of transmission, especially the smartphone upgrade and popularity, everyone can be very convenient to produce video audio content. But even so, from the perspective of new media, video and audio production, dissemination, and review are more complicated than graphics.[1] And artificial intelligence in the field of language and image recognition has matured, even many have been applied to people's lives, such as hkust xunfei "voice input method", gold land "intelligent voice navigation", Baidu "Baidu map", Microsoft's Microsoft "flower", the language and image recognition of artificial intelligence technology and new media will have multidimensional combination. However, the application of AI in news production also brings ethical and privacy issues, such as the possibility of prejudice and discrimination, or invasion of personal privacy. Therefore, we need to pay close attention to these problems and take corresponding measures to avoid and solve them.

2. The use of machine learning in content recommendation systems

Machine learning is a subset of AI and is widely used in content recommendation systems. Based on a user's browsing history, preferences, and behavior, machine learning algorithms are able to predict what users may be interested in and make recommendations. This greatly improves the efficiency of content distribution, but it can also lead to the information cocoon effect, where users only see what they like and ignore different views.[1] It will be a progressive process to give self-awareness to machine hardware, where machine learning specializes in how computers simulate or realize human learning behavior to acquire new knowledge or skills and reorganize the existing knowledge structure to continuously improve

their own performance. At the same time, machine learning is also the core of artificial intelligence, which is the fundamental way to make computers have intelligence. New media environment is increasingly complex, new media people must keep learning to keep up with the rapid change of new media overall environment, let alone meet the new media and audience multiple hardware and software machine, when artificial intelligence grew to a certain stage, can improve the algorithm accuracy, perfect algorithm, also can low cost quickly meet the needs of all aspects of new media development application requirements, promote the development of new media.

3.The influence of artificial intelligence in the process of new media communication

With the rapid development of science and technology, artificial intelligence has great potential in new media communication, which can bring more intelligent, efficient and personalized information dissemination and service.

3.1 Rapid production and distribution

AI can quickly generate and analyze large amounts of news and information and quickly distribute them to audiences around the globe. In some emergency reports, AI can generate preliminary news reports in a short time and distribute them quickly, which plays a very important role in transmitting information quickly and maintaining timeliness.[2] In addition, AI can also automatically classify and organize a large amount of information, improve the efficiency of information management and retrieval, so as to better meet the needs of users.

3.2 Personalized communication

Artificial intelligence can realize the personalized dissemination of news and information by analyzing users' behaviors and interests. For example, some news APPs use AI technology to recommend corresponding news and information based on users' interests and preferences. This personalized communication can better meet the personalized needs of users and improve the efficiency of user experience and information transmission. At the same time, AI can also continuously optimize the recommendation algorithm according to user feedback and behavior to improve the quality and accuracy of recommendations.

3.3 Accurate push

Artificial intelligence can realize accurate information push according to users' characteristics and behaviors. For example, some advertisers use AI technology to push AD messages based on users' interests and buying behavior. This precise push can improve the delivery effect and conversion rate of advertising, but also can avoid unnecessary interference and harassment to users.[3] In addition, AI can also realize more accurate information push according to users' geographical location, time and other clues, and improve the pertinacity and effectiveness of information dissemination.

3.4 Interactive experience

Artificial intelligence can realize more intelligent interactive experience, such as intelligent speech recognition, intelligent question and answer, intelligent chat and so on. These technologies can enhance user engagement and engagement, and improve the user experience. For example, in some news APP, users can quickly post comments and share news through voice input, greatly increasing user engagement and interactivity. In addition, the intelligent question and answer system can quickly provide accurate answers and information according to the user's questions, improving the efficiency and experience of users to obtain information.

3.5 Automate the audit

Artificial intelligence can review a large amount of media content, improve the efficiency and accuracy of audit, and reduce the cost and error rate of manual audit. For example, on some social media platforms, AI can quickly review the content posted by users, find sensitive information and violations, and timely process and ban them, thus improving the efficiency and security of information management.

However, the potential of artificial intelligence in new media communication has also brought some problems and challenges.[4] First, AI may bring bias and discrimination, such as algorithmic discrimination based on race, gender, social status and other factors. Secondly, AI may violate personal privacy when processing personal information, such as analyzing user behavior to track and record users' personal information. In addition, AI may also cause problems with information overload and misleading users, such as the dissemination of false information and misleading information.

In order to give full play to the potential of AI in new media communication, we need to take corresponding measures to solve these problems and challenges. First, first of all, we need to establish a fair and transparent algorithm system to avoid problems such as algorithm discrimination and personal information leakage. Secondly, we need to strengthen supervision and management, standardize the use and operation of AI, and ensure the authenticity and accuracy of information.[5] In addition, we also need to improve the public's media literacy and information identification ability, and enhance the ability to distinguish false information and misleading information.

In short, artificial intelligence has great potential in new media communication, which can bring more intelligent, efficient and personalized information dissemination and services. However, we also need to pay attention to the problems and challenges that they may bring, and take corresponding measures to avoid and solve them. By exploiting the potential of AI, we can better meet the needs of users and improve the efficiency and security of information dissemination.

4. Challenges and opportunities of artificial intelligence in the identification of false information

4.1 Artificial intelligence poses challenges for the identification of false information

First, with the continuous progress of AI natural language processing technology, counterfeiters and criminals can use more advanced online manipulation and deep counterfeiting techniques to make false information more realistic and difficult to identify. Secondly, many current AI models have technical limitations in the detection of false information, which can only detect the types of false information

included in the database. For new types of false information, they need to be detected manually detected. In addition, the potential algorithmic bias, lack of transparency and interpretability of AI models may also lead to identification errors. Finally, there is still a widespread lack of technical experts who can effectively manage AI models, explain their results and understand their deeper strategies.

4.2 Opportunities

Artificial intelligence can use machine learning, deep learning and other algorithms to train models that can identify false information. For example, false information can be identified by analyzing language patterns, detecting objects, faces, and actions in images. In addition, AI can also provide coping strategies for governments and businesses by analyzing the language and emotions on social media and predicting social trends and public sentiment.

To sum up, artificial intelligence faces challenges in the identification of false information, but it also brings opportunities. In the future, we can continuously improve the technical level of artificial intelligence, strengthen supervision and management, and standardize the use and operation of artificial intelligence, so as to better play the role of artificial intelligence in the identification of false information.

5. Innovative application of robots in the news media industry

In recent years, robotics technology has also been widely used in the news media industry. Automatic news writing robots can quickly generate formatted news, such as financial reports and weather forecasts. [6] In addition, there are special robots, such as drones for remote shooting and chatbots for interviews. From news writing, editing, translation, proofreading, to public opinion monitoring, recommendation system and other links, robots have become an important participant in the news media industry. Here are some of the innovative applications of robots in the news media industry:

(1). News writing robot: News writing robot can automatically generate news reports, sports event reports, financial reports and other types of news articles according to the preset templates and language rules. For example, Tencent's "Dreamwriter", Xinhua News Agency's "fast pen new" and so on.

(2). Machine translation: Machine translation has become a powerful tool for rapid translation of news summaries, foreign language reports, overseas microblogs and other content. For example, Google Translate, Baidu Translation, Youdao Translation, etc.

(3). Public opinion monitoring: The public opinion monitoring robot can monitor the information on the network in real time, automatically identify and analyze the public opinion information involving specific topics, and provide decision support for the media and the government.

(4). Recommendation system: The recommendation system can help the media to recommend personalized news content according to users' interests and behaviors. For example, the recommendation algorithms for applications such as Toutiao and TikTok are based on machine learning technologies.

(5). Virtual anchors: Virtual anchors can simulate the voice, facial expressions and movements of human anchors through artificial intelligence technology, realizing 24-hour uninterrupted news broadcast. For example, Xinhua News Agency's "new small broadcast", CCTV's "small C" and so on.

(6). Interview assistant: The interview assistant can automatically record the interview content and generate preliminary news articles through natural language processing technology. This can help reporters to complete the interview work faster.

(7). Content review: The content review robot can automatically review news content, identify sensitive information and illegal content, and improve the efficiency and quality of content management of news media.

In general, the application of robots in the news media industry is constantly innovating and developing, and it is expected to play a greater role in more links and fields in the future, and bring more efficiency and quality improvement to the news media industry.[7]

6. Conclusion

The combination of artificial intelligence and new media is changing the way we live and work. The application of AI improves the effect of news production and content recommendation, as well as the accuracy of social media analysis and disinformation identification. At the same time, deep learning also provides new possibilities for understanding the image and video content. The application of artificial intelligence in user behavior prediction and robotics on new media platforms has also demonstrated great potential.

However, the application of AI also brings a series of problems and challenges, including privacy issues, information cocoon effect, identification of false information, and machine replacement of human work. In the future, we need to study and discuss these issues in more depth to ensure that the integration of AI and new media can bring more benefits and progress to our society.

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