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The Application Status of Artificial Intelligence Writing and the Feasibility of its Application in Network Literature

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Abstract:

Artificial intelligence(AI) writing has been a rising star in science and literature in recent years. AI writing is successfully used in creating news, official documents, and poetry, while China's network literature originated in the 1990s and has been developing for 30 years. This paper aims to analyze the feasibility of applying AI writing to the field of online literature. This paper mainly uses literature analysis and comparative research methods, combined with existing data, to compare the differences between AI writing and manual writing, as well as network literature and traditional literature. The analysis shows that although the current AI writing has the advantage of speed and quantity, it also has problems, such as lack of aesthetic value and inability to arouse emotional resonance. Network literature has shown many characters and complete classification characteristics, but label production literature does not have substantial defects. Given the many similarities between the two, it is feasible that online literature and art will become the following application fields of AI writing. This application can also help the continuous progress of AI technology.

Keywords: AI writing; Network literature; Literariness; Man-machine collaboration.

1. Introduction

AI writing has experienced the development from "literary machine" to "machine literature". In this process, AI writing not only updates the existing literary experience and knowledge but also provides new potential energy, methods, and paths for the future development of literature, showing obvious creativity at the macro and micro levels. Network literature is the product of the rise of the Internet. The original online literature was non-profit, and the author's creation was more accessible and literary. In recent years, network literature has undergone marketization, gained public attention and shaped a distinct cultural landscape. However, the influence of profit-driven capital and market forces has led to challenges, including content labeling and a decline in literary quality. This has placed network literature

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in a dilemma, where commercial interests overshadow its artistic value. The characteristics of network literature and AI writing are similar in many aspects, which reveals the infinite potential of the organic combination of AI writing and network literature in the future. Based on this, the paper examines the two research paradigms of natural language processing: rationalism and empiricism. Utilizing literature review and cross-disciplinary analysis, it explores the advantages and limitations of current AI writing and network literature‘s development trends and characteristics. The study finds significant commonalities between network literature and machine-generated writing. It shows the great potential of machine writing in the application of network literature and art. It puts forward that the concept of man-machine collaboration is the ideal form of this field in the future. Still, at the same time, social problems should be paid attention to, such as legal rights and interests in developing science and technology.

2. Analysis of the Advantages and Disadvantages of AI Writing

2.1 Model Production: Features of Machine Writing

Although AI writing has experienced a paradigm shift from rationalism to empiricism, it always has three characteristics. First, the writing process is completed by human-computer cooperation, and the computer is the explicit author of AI writing. Secondly, it is based on a language model. The rationalist paradigm adopts the model based on grammatical rules, while the empirical paradigm adopts the language model based on statistics and neural networks. Finally, AI generates natural language text through computational writing. These three qualities highlight the essence of AI writing, the process by which a computer generates natural language text from a language model. The language model is a specific method for realizing AI writing. In the process of AI writing, it is difficult for computers to directly deal with complex natural language, so it is necessary to formalize natural language with mathematical methods and establish a formal model of language, referred to as a language model [1]. AI under the paradigm of rationalism, realizes language representation and reasoning by induction of language rules. Under the empirical paradigm, AI can be trained on large-scale text data and generate high-quality content, called applied statistics, because its underlying logic is probabilistic statistics. At present, the language models of rationalism and empiricism have advantages and have made some achievements in different writing styles.

2.2 The Advantage of Machine Writing: Quantity and Speed

AI writing is no longer limited to manual and can produce a large number of texts in a short period of time, to the more mature technology application of the news industry as an example, the traditional reporter daily newspaper article of about 1000 words. Compared with traditional manual writing, the shock brought by robot writing is impressive. The United States experimented in May 2015: Scott Horsley Scott Horsley, the White House reporter for National Public Radio (NPR), and the robot WordSmith wrote a short report on the financial results of a catering company at the same time, comparing who wrote faster. The result was that WordSmith finished in 2 minutes, while the White House reporter took a full 7 minutes, and WordSmith beat the White House reporter in speed [2]. Secondly, “robot news” also has the characteristics of “news sensitivity”. It can find valuable content in the vast flood of data and rewrite news reports, and the output is often much higher than that of human writers. After the Associated Press introduced Wordsmith, a robot, to participate in producing news stories, the number of news stories jumped from more than 300 to more than 4,000.

2.3 The Shortcomings of Machine Writing : Lack of Aesthetic Value and Lack of Emotion

Although AI writing has many advantages, it still has many imperfections, such as data stacking in constructing the main body, content template, and lack of temperature. After all, writing is a complex process, and simply grasping data cannot convey the true meaning of writing. With the advent of the intelligence era, robot writing wins quickly, and its content does not have much of a fantastic sense [3]. Despite efforts to understand human emotions with the help of natural language processing and neural network models, the delicate relationship between complex emotions and rigorous data has not been properly handled in practical applications. As a result, the reports generated in the AI writing mode are dry and flat. At present, it can only display its skills in the fields of data news, such as sports and finance and some official document writing. The shaping of human emotion comes from the perceptual grasp of the whole society based on practice, and the formation of AI emotion is also similar to the socialization process of a person. Without the critical premise of practice, it will be difficult for writing robots to have humanistic care - this “human” high-level emotion by relying only on imitation and learning.

Secondly, the deconstruction is loose, and the content theme does not fit closely. For example, suppose you input the theme of ancient poetry “ 云松 ”(Chamaecyparis

pisifera)into the Shi300 AI app and select five characters. In that case, you can quickly get the following text based on the empirical paradigm:
白鹤舞清秋 , 云松共偃休。
何时归去此 , 长伴赤松游。
The poem means cloud pines and white cranes dance in the clear autumn. Clouds and pines fall asleep together. When cranes come again, they will live with red pines.
The app has an extensive database of ancient poems. When the user enters the theme of the poem, the platform guesses the first word " 白 "(white) through probability calculation, then uses the "white" and semantic vector to infer the second word " 鹤 "(crane), and then predicts the third word " 舞 " (dance) according to the "crane" and semantic vector, and so on until the terminator is predicted. The first two sentences of the song " Chamaecyparis pisifera " describe the scene of a white crane dancing in late autumn, standing by the cloud pine to rest. The last two sentences ask when the white crane returned to the fairy side, accompanying the fairy travel. Although the title is " Chamaecyparis pisifera ", the poem does not revolve around Chamaecyparis pisifera.It divides " 云松 " into " 云 "(clouds) and " 松 "(pines), which makes the relationship between the content and the title of the poem generated by AI is not close. It seems that it does not satisfy the basic standards of poetry writing.

3. The Potential Commonalities Between Network Literature and Current AI Writing

The first is a similar subject-object relationship. In the Internet era, the human-centered concept of subjectivity in traditional literature has been split and deconstructed. In the face of new cultural contexts and literary forms, intersubjectivity, emphasizing the equal interaction between subjects, has become the dominant form of subjectivity in this era. Media can realize its value and significance only when interacting with people. The technological media embodies intermediateness, and the media is no longer a tool for the subject to understand the object; it has become another subject that can play an independent role outside the subject [4]. AI technology has brought a new subject pattern of AI creation to literature, that is the emergence of AI writing subject. There are mainly two types of traditional literary activity paradigms, one is Abrams' "triangle mode" [5], the other is Liu Ruoyu's reformed "four-element cycle mode" [6]. However, both are influenced by ontological thinking and tend to choose the last element in the original position as the ultimate manifestation of literature, that is, the "work" as the center. Study the paradigm of literary activity. Abrams' triangular model ignores the involvement of media elements, while Liu Ruoyu's four-element cycle model ignores the aspects of media, although it pays attention to the link of literature communication. The emergence of network literature has ultimately brought the often-overlooked concept of "media" back into public focus. The interactive nonlinear and three-dimensional multi-media of network media make network literature become a dynamic and integrated existence. Network literature activities break the ontological paradigm of traditional literary activities. In network literature activities, intersexual elements are dynamically circulating, connecting all links. When one process is in progress, other processes are in progress simultaneously. In contrast, this indicates that the traditional literary activity is a relatively static and separate activity paradigm, while the process of online literary activity has a random reference, and any element can randomly refer to other elements, forming an intersexual cycle. In the Chinese online environment, serialized network novel authors can receive real-time feedback from readers on each chapter. Based on this feedback, authors often adjust their original creative direction to align with readers' preferences, crafting novels that meet audience expectations. This is similar to today's AI writing model, which can write according to user needs until it fully satisfies consumers. Second is the homogenization of label production. American scholar Mark Bost proposed the idea of Super-panoramic prison, arguing that "today's 'communication loops' and the databases they generate constitute a' super-panoramic prison ', a supervision system without walls, Windows, towers and jailers" [7]. Specific to the field of network literature, the more detailed the classification of works labels, the easier it is to divide the reader group into a relatively independent and closed small circle. On the one hand, categorical labels, especially subdivided content trend labels, already have stylized narrative inertia and strategies. Under the influence of labels, readers make choices and vote for the production of stylized online literature works based on the data traces left by their participation, thus leading to the mass production of typed and routine novels that follow the trend of market selection instead of creation. To satisfy the reader's "voluntary" aesthetic needs under the cover of interest freedom. On the other hand, labels further realize the division of the circle of readers, and the cultural separation between labels is deepened. As a result, readers are subjected to significant aesthetic limitations when making reading choices and eventually get lost in the layer of labels that are refined step by step. Their subject's right of discourse is hidden so that they are unable to explore their real aesthetic interests.

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4. The Application Prospect of AI Writing in Network Literature

4.1 Interaction Between Machine Writing and Network Literature and Art

At present, many intelligent writing software, such as openAI and ChatGPT, support human-machine collaboration to a certain extent. However, the mainstream software still stays in the manual input and requires the machine to output as much as possible to meet the text requirements. There is still a distance from the actual application of AI writing technology to online novels. However, there are several sets of interactions between machine writing and online literature that make the idea feasible.

The underlying logic of AI writing is to collect massive data and fill in elements by borrowing writing formulas. After decades of network literature development, many texts can be used as databases for machine analysis. At the same time, although many literary critics have criticized the problem of labelling homogenization presented by online literature, this feature greatly reduces the difficulty of AI learning and output. Hence, the modular writing structure coincides with the modelling writing of AI writing.

Network literature is usually serialized in chapters on the network, and readers can express their opinions on the forum after each serialization so the mode of correcting writing ideas is constantly receiving feedback and has certain similarities with the operation mode of AI software at the present stage. Users can constantly improve the AI software model according to the requirements of readers so that AI can adopt deep learning methods. Simulate the grammar rules, sentence structure and semantic information in the text, and then master the expression of natural language to obtain the text that conforms to human reading habits. Finally, the AI needs to optimize and tune the model based on the quality of the generated text, and it needs to iterate many times until the model reaches the desired level of performance.

4.2 Social Issues

With the continuous development of AI, international organizations and some developed countries also attach great importance to the content generated by AI and actively seek ways to protect its copyright. The United Kingdom was the first country to consider the copyright issue of computer creation and set up the Copyright Law Revision Committee in 1973 to study the copyright issue of computer creation. Other developed countries are also actively exploring copyright legislation for AI products. From the perspective of the production process of products, AI itself does not qualify as a legal subject; it is only a tool used by human beings to complete a certain task and cannot enjoy copyright, which indicates that the ownership of rights of AI products must be distributed among human subjects. Unlike the ownership of copyright rights in general works, generating an AI product often involves the rights and obligations of multiple subjects, including the designer, owner and user of AI. In most cases, the AI designer, owner and user are often different subjects, and the identity of the AI designer, owner and user is rarely mixed. The above subjects all have a certain degree of connection with AI products. Therefore, the AI products that satisfy the composition of the work, whose rights belong to the above subjects, that is, how the rights of the AI products should be distributed among the above subjects, is also a controversial issue. The first is the designer of AI. Undeniably, the designer of AI plays a crucial role in the generation and development of AI. Without AI designers' input and effort, AI's creative ability in the cultural copyright market would be out of the question. The designer infuses human will and emotional choice into the AI system by setting programs and algorithm training, thus providing AI with a general creative direction and choice space. AI begins to appear in cultural copyright and gets certain development, but it does not give the designer the right to use AI products based on this. At the beginning of the completion of the AI creation program, the AI designer can obtain relevant rights according to copyright provisions on the work, and his investment in the design and research and development process has been paid at the beginning stage. The rights enjoyed by the AI designer should be limited to the AI technology itself and should not be extended to the AI products. Otherwise, it is equivalent to secondary protection, and other rights subjects must enjoy the rights of the product to improve the enthusiasm of communication. Then there are the owners of AI. It is up to the owner of the AI, such as the investor, to obtain the product's copyright. This view holds that the generation of AI systems cannot be separated from the capital and talent support of investors, and owners are required to assume the corresponding economic and risk responsibilities. Owners provide the material basis for the research and development of AI. In the case of the participation of multiple subjects, the rights of AI products can be attributed to the owner, which can avoid the situation of rights differentiation, thus improving communication efficiency. This view holds that the owner of AI has a decisive role in the outcome of AI products and can enjoy copyright through the legal works system in the company [8]. The protection of AI is not the property interests of the designer, but the rights and interests of the investor of AI, and a right protection mode should be established

with the agreement as the priority and the AI owner as the centre [9]. Finally, the user should obtain the copyright to the product. This view holds that AI products are directly controlled and controlled by the user, and when AI products are created, when they are publicly published, and how they are traded on the market are controlled and controlled by the user. The relationship between AI products and users is the closest. Users can input creative instructions to AI according to their own needs, AI will use algorithm generation technology according to the requirements of users for processing and processing, and finally, form an intellectual achievement that reflects the user's thought and will. Compared with the designer and the user, the contribution and effort of the AI designer are mainly related to the AI itself, while the production of AI products is directly related to the user, and cannot be separated from the user's choice and input. Assuming that AI is the initial manifestation of the designer's will, then the user's will plays a decisive role in producing AI products. Users need to pay a certain cost to obtain the right to use AI. The purpose is to use AI to produce products to satisfy their own needs. If the right to AI products is not granted to users, then users pay the cost to obtain the right to use will become meaningless in the absence of any benefits and returns. Users' enthusiasm to use AI to create will be reduced, which will harm the cultural copyright market, and go against the purpose of copyright to encourage creation. In general, it is more reasonable to grant the rights of AI products to users, make the supervision of AI more operational and convenient, help improve the creation efficiency and level of AI, and promote the benign development of the cultural copyright market.

4.3 The Future Direction of Human:Machine Collaboration

From the perspective of AI literary writing practice and human traditional literary writing practice, creation has always been the core of the debate. Traditional humanism has long upheld the value that "human beings are the central subject of literary creation." It posits that only natural persons, as biological entities, possess independent consciousness and emotional thinking, which forms the essential physiological foundation for developing literary meaning and value. Therefore, it has always tried to exclude the practice of AI literary writing from the field of "literary creation". The position of traditional humanism expresses its unease and fear in the face of the new writing field. The natural person's creativity, which was once based on the organism as the only argument, will now face the risk and challenge of deconstructing its physical "embodiment". With the "attack" of AI on a world dominated by human beings, human beings' cognition of their own "subjectivity" is also about to or has already faced a new revolution - the information technology revolution. As Luciano Floridi once said, "Turing made us realize that human beings were no longer the unquestioned masters of the information sphere, that digital devices were taking over more and more of the tasks that human minds had solved, and that human beings were being forced to abandon one after another of the positions that they thought were unique" [10]. In the future literary era, whether the subject of creation is a biological natural person or an intelligent machine should not be a life-and-death card for human beings to position the practice of literary writing. The current active attempt to pursue the motivation of AI writing practice is not an attempt to seize the living space of human subject writing practice, but a breakthrough experimental process in technical ability. For intelligent machines to play a truly effective and beneficial auxiliary role in literary creation, achieving synergy with human authors, they must first reach the benchmark of human writing proficiency in core intelligent operations. Only then can they become powerful assistants, better supporting human writing practices and fulfilling their functional potential. From the standpoint of posthumanism, the relationship between man and machine in postmodern society is no longer a simple information production and transmission but closely related to physical perception and emotional communication and interaction. As Heller imagined and predicted in "Why We Became Posthuman": "In the posthuman view, there is no essential difference or absolute boundary between physical existence and computer simulation, between human-machine relationship structure and biological organization, between robotics and human goals" [11]. He wants to express that even if he hopes that in the future era, human beings can be closely linked with intelligent machines in a suitable and comfortable state, the interaction and writing between the two can be smoother. The human intelligence and machine intelligence can fully play their proper roles and do their best to achieve a kind of "everything is a medium." The Kangsheng situation of man-machine integration and co-evolution [12]. However, the development of intelligent machines still cannot be separated from the characteristics of human subjects in the field of literature. The pursuit of personality "humanization" in the process of literary creation determines the necessity of the existence of human creative subjects. The machine follows algorithms and logic, so it will never be confused or forgetful. In the process of literary writing, in order to maintain professionalism and accuracy, it is impossible for it to significantly try to exceed the conventional writing paradigm [13]. This provides space for the human subject to play its role. Because of the subcon-

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scious and unconscious existence of human beings, it is not always possible to ensure a clear and stable perception and memory. At times, it is within the midst of chaos and uncertainty, when names and paths are undefined, that inspiration strikes unexpectedly. In such moments, unconventional paths emerge, leading to the creation of fresh and innovative literary works. Under the concept of "human-machine integration, co-evolution", intelligent machines can use their strengths in the data memory bank and operational reasoning to help the operation play a role in logical thinking, and follow the richness and individualization of human image thinking and "deindividalization" to expand the wings of imagination, thus promoting the practice of literary writing to open a broader practice space. Create more colorful literary content.

5. Conclusion

AI writing based on AI technology is a new way of producing literary works. Its operation principle is to convert the collected data into text using natural language generation technology. This paper finds that AI writing has the characteristics of precision and high yield, truth and objective, high efficiency and low cost. However, due to technical limitations, AI writing currently shows that the literary and interesting works are not substantial and cannot make people have emotional resonance. Therefore, AI writing is now only used in some news writing, official document writing and a small amount of poetry and thesis writing. In contrast, with the development of network literature in recent decades, network literature has accumulated a huge number of texts that can become a ready-made corpus for AI to learn. Moreover, the cyclic mode in online literature can receive feedback from readers in real time, similar to the AI writing paradigm. The characteristics of network literature, such as content labeling and diminished literary quality, align seamlessly with the core principles of AI writing. This suggests that network literature is a highly suitable domain for the next stage of AI writing applications and can potentially drive further advancements in AI writing technology. Although the future of AI writing may cause an infringement of privacy and copyright protection of social problems, the intelligence of literature is the trend of The Times, AI and network literature and art will be more comprehensive and in-depth integration, the field of application of AI writing will become more extensive, the manuscript written by intelligent machines will appear in front of the audience in large numbers.

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