



Submitted on: 04.09.2023

---

## **Study on the Scenario-based Application of ChatGPT and Its Risk Avoidance Strategies from the Perspective of Information Literacy**

**Chao Wang**

School of Information Management, Sun Yat-sen University, Guangzhou, China  
E-mail address: wangch385@mail2.sysu.edu.cn

**Xinyu Tong**

School of Information Management, Sun Yat-sen University, Guangzhou, China  
E-mail address: tongxy7@mail2.sysu.edu.cn



Copyright © 2023 by Chao Wang and Xinyu Tong. This work is made available under the terms of the Creative Commons Attribution 4.0

International License: <http://creativecommons.org/licenses/by/4.0>

---

### **Abstract:**

*With the continuous development and popularization of artificial intelligence technology, ChatGPT has become a highly regarded large language model since its launch. In the ChatGPT boom, information literacy is crucial to how to correctly understand and use ChatGPT. This article first introduces the language generation logic and defects of ChatGPT, and designs a scenario application example of ChatGPT in combination with the three scenarios of information literacy: life, study, and work. Through screening and analyzing the responses of ChatGPT output, it discusses the potential risks in its application process, and finally puts forward the main strategies to avoid and resolve the risks of ChatGPT from the perspective of information literacy, in order to help users better cope with the opportunities and challenges under the impact of AI technology.*

**Keywords:** Information Literacy, ChatGPT, AIGC, Information Screening

---

## Introduction

With the continuous development of artificial intelligence, its derivative technologies and products are receiving more and more widespread attention from various industries and fields. In recent years, Artificial Intelligence Generated Content (AIGC) has become a focus and hotspot that has attracted the attention of academia and the industry. On November 30, 2022, OpenAI, an American artificial intelligence research company, launched Chat Generic Pre trained Transformer (ChatGPT) ([OpenAI 2022](#)), setting off a new wave of AIGC applications. Just two months after its launch, ChatGPT's user base easily surpassed 100 million, becoming the fastest-growing consumer application in history, with user growth far surpassing application giants such as Facebook, Instagram, and TikTok ([Reuters 2023](#); [Wodecki 2023](#)).

The longer and better quality continuous dialogue, excellent imitation and contextual ability, as well as a certain degree of logic and common sense, all of these characteristics make ChatGPT stand out in a large number of AI applications and are widely favored by academic, technological, and ordinary users outside the industry. However, the problems also follow. Information fraud, Data breach, and ethical risks have become a dark cloud that has been enveloped in ChatGPT, causing multiple concerns. Many countries around the world have taken a series of control measures such as access restriction, account blocking, etc. ([Forbes 2023](#); [Fortune 2023](#); [CBC 2023](#)). Even so, AI applications represented by ChatGPT remain popular. Faced with the high impact and increasing problems and challenges in the short term, how to guide users to not only benefit from AI applications but also effectively avoid or resolve risks during the ChatGPT craze is an important content worthy of academic consideration.

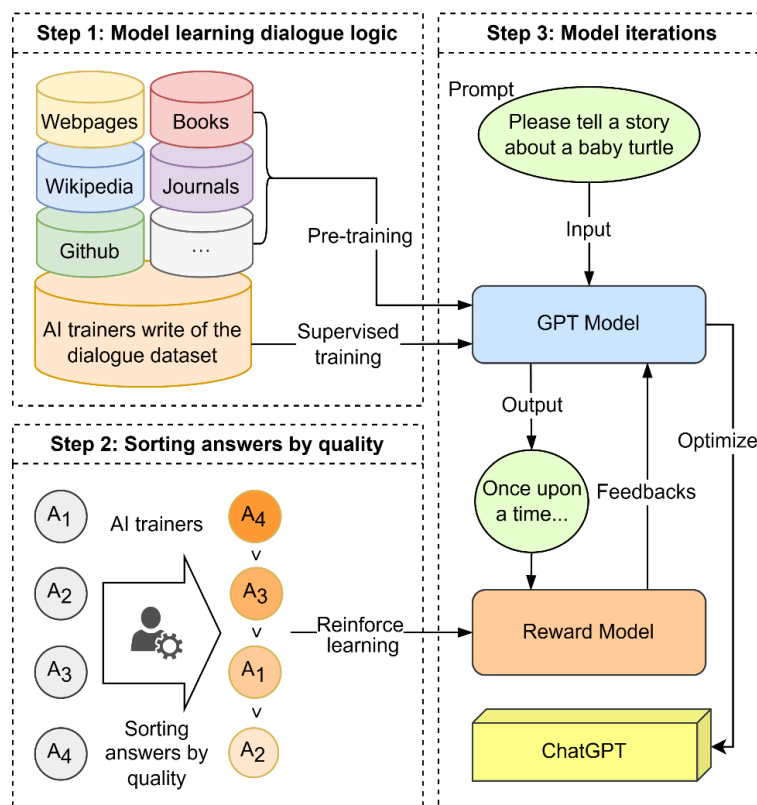
## Language Generation Logic of ChatGPT and Its Defects

ChatGPT and other generative AI technologies fall into the AIGC category, which creates digital content such as images, music, and text through AI models. AIGC's goal is to make the content creation process more efficient and accessible, and to produce high-quality content at a faster rate by extracting and understanding the intent of instructions given by humans and generating content based on its knowledge base and intent ([Cao et al. 2023](#)). Generative Pre-trained Transformer (GPT) ([Radford 2018](#)) and Bidirectional Encoder Representation from Transformers (BERT) ([Devlin et al. 2018](#)) are both large-scale pre-trained language models using the Transformer ([Vaswani et al. 2017](#)) architecture as the underlying architecture, but the difference is that BERT uses a bidirectional encoder-decoder encoding module, whereas GPT only uses a decoder for unidirectional encoding, which also allows GPT to focus more on text generation and reduce the interference caused by redundant information.

ChatGPT, released in December 2022, is an intelligent dialogue program based on GPT-3.5, which implements intention capture and text generation by building a basic

architecture of “corpus + pre-training + fine-tuning” (Qian et al. 2023). The training corpus is derived from publicly available and licensed data, such as Internet data and third-party provider data, and the pre-training and fine-tuning phases use Reinforcement Learning from Human Feedback (Christiano et al. 2017) to enhance the degree of “humanization” of the generated content. The training samples are constructed by Promote Learning to train a Reward Model that reflects the effect of the predicted content, and finally the scoring of this Reward Model is used to guide the training of the reinforcement learning model. Finally, the model is fine-tuned by Proximal Policy Optimization Algorithms to obtain the best performing parameters. Figure 1 compares the training process of ChatGPT.

Figure 1: ChatGPT training process



Briefly, because there is no way to ensure that all questions asked by users are included in the knowledge base used for training, the output of ChatGPT is not derived from retrieving the existing knowledge base, but rather from training and fine-tuning the model using a large-scale corpus to generate content that mimics the natural logic of human language. To achieve this, OpenAI uses AI trainers in training ChatGPT to write dialogue datasets and question-answer logic to help the model learn and imitate human thinking logic and language habits to output answers. After the model initially mastered the natural language logic, the AI trainers obtained multiple sets of answers from ChatGPT for the same question, and manually ranked the answers from best to worst to train a reward model that could achieve automatic

evaluation. Finally, the optimization process of ChatGPT is completed by automatically iterating the “question-output-evaluate-feedback” process to help it generate better content (OpenAI 2022).

The main advantage of ChatGPT is its high mastery of natural language, which allows it not only to generate fluent and coherent texts, but also to understand and process them in a variety of ways, such as summarizing, translating, or answering an extremely wide range of questions (Bubeck 2023). The translation mentioned here is not only between different languages, but also includes tone, style, and translation across domains, such as medicine, law, accounting, computer programming, music, etc. Meanwhile, thanks to the pre-training of large-scale corpus, ChatGPT has good performance in open domain dialogues, generating fluent and natural utterances for problems with different languages, different domains, and multimodal (text, speech, and image) inputs. In terms of applications, the GPT model can be fine-tuned to suit specific tasks and domains, such as question and answer, summary generation, and dialogue generation, to better meet the needs of specific applications. The emergence of ChatGPT marks the dawn of the era of general AI, implying that AI has a wide range of learning capabilities and reaches or exceeds the level of ordinary humans in many areas, which will have a huge and far-reaching impact in human society with a huge and far-reaching impact (He et al. 2023).

The enthusiastic discussion on ChatGPT has also led to a critical consideration of generative models. Although generative models can efficiently output high-quality texts in natural language, their major limitation is the problem of “artificial intelligence illusion”, that is, the models can output deceptive misinformation that makes it difficult for users to recognize its authenticity without checking its facts and sources (Bubeck 2023; Ji 2022). Brewster et al. found in the process of interacting with ChatGPT that if there is some wrong information in the keywords entered by the user, ChatGPT not only fails to recognize the error but also generates misleading answers for the wrong keywords (Brewster, Arvanitis & Sadeghi 2023). In addition, ChatGPT makes it clear in its response that, as a language model, it is able to generate texts based on patterns in the data it is trained on, but its answers may be influenced by inaccuracies or biases in the data. Therefore, its answers should not be considered simply as “facts” but as a possible answer based on data patterns, and users need to further verify the accuracy of the information before posting content, otherwise they will fall into the trap created by the “AI illusion”. Careful evaluation and analysis of ChatGPT’s answers should be an important part of the user’s interaction, and information literacy is a key guarantee of this part.

## **Scenario-based Application Examples of ChatGPT and Its Potential Risks**

Based on the transformation of public demand and the consideration of audience perspective, both information literacy and digital literacy, as an upgraded version in

the digital era (Pan & Ban 2022), are currently extending and expanding to the scenario based promotion mode. Whether it is “Three Scenarios” (life, study, and work) (Pan & Chen 2017; Pan & Li 2017; Pan 2018), “Five Scenarios” (life, health, education, work, citizen rights and interests) (CILIP 2018) or “Four Scenarios” (digital life, digital learning, digital work, and digital innovation) (CAC 2021), all emphasize the close connection between information literacy and real scenes. The improvement of information literacy in real scenes, especially in digital scenes, requires the deep involvement of digital technologies and means, and the role that AI can play in it cannot be underestimated. ChatGPT, as a question and answer AI program, has attracted a large number of users to interact with it in different scenarios with its massive data based training reserves and easy usage. By using experimental methods, typical questions in three scenarios of life, study, and work are designed and answers to ChatGPT responses are collected. The authenticity or feasibility of the responses are analyzed to explore the application risks of ChatGPT in different scenarios.

### **Life Scenario: using ChatGPT to plan tourism strategy**

With the improvement of the epidemic situation, the global tourism market has begun to warm up, and a large number of people have started to choose to travel, even experiencing phenomena such as “retaliatory consumption” and “special forces tourism”. The formulation of tourism plans, as a typical content in daily life scenarios, is closely related to the quality and experience of users’ travel. The tourism industry has also begun to introduce AI technology to help users formulate tourism plans. On April 7, 2023, Expedia, the world’s largest online travel company, announced the introduction of ChatGPT technology in its iOS application to assist travelers in developing travel plans (Sina Finance 2023). A series of issues need to be verified, such as whether the tourism plan generated by ChatGPT can meet user needs and whether it is feasible to coordinate time and location arrangements.

Send a request to ChatGPT, “Please develop a ‘two day and one night’ tourism plan for Guangzhou, which requires detailed time planning, location and introduction, route arrangement, etc.” The following is the content of ChatGPT’s response<sup>①</sup>:

Okay, here is a two day and one night travel plan for Guangzhou:

Day 1:

Morning: You can go to Canton Tower (“Tower Station” of Line 3), which is one of the iconic buildings in Guangzhou and the tallest TV tower in China. You can enjoy the beautiful scenery of Guangzhou here and take photos as a souvenir.

Noon: For lunch, you can go to “Beijing Lu” Pedestrian Street (“Beijing Lu Station” of Line 1),

---

<sup>①</sup> NOTE: In this article, the time for interactive Q&A between the experimenter and ChatGPT, as well as the time for verifying the answer content through online retrieval, was April 13, 2023.

which is one of the famous commercial pedestrian streets in Guangzhou. There are various specialty snacks and shops, where you can taste authentic Guangzhou cuisine.

Afternoon: In the afternoon, you can go to Yuexiu Park (Yuexiu Park station of Line 2), which is one of the largest urban parks in Guangzhou, with beautiful lakes and gardens, where you can take a walk and rest.

Evening: For dinner, you can go to Liwan Plaza (“Liwan Plaza Station” of Line 6), which is one of the famous food streets in Guangzhou. There are various special snacks and restaurants, where you can taste authentic Guangzhou food.

Day 2:

Morning: In the morning, you can go to the Guangzhou Museum (“Guangzhou Museum Station” on Line 2), which is one of the largest museums in Guangzhou. There are various precious cultural relics and artworks, and you can learn about the history and culture of Guangzhou.

Noon: For lunch, you can go to Taotaoju Restaurant (“Huangsha Station” of Line 1), which is one of the famous restaurants in Guangzhou. With authentic Guangzhou food and comfortable environment, you can enjoy food here.

Afternoon: In the afternoon, you can go to Baiyun Mountain (“Baiyun Culture Square Station” of Line 2), which is one of the famous natural scenic spots in Guangzhou. There are beautiful mountains and scenery, where you can walk and enjoy the beautiful scenery.

Evening: In the evening, you can go to the “Pearl River Night Cruise” (“Zhujiang New Town Station” of Line 3 and Line 6), which is a good place to enjoy the night view of Guangzhou. You can enjoy the beautiful night scenery and Laser lighting display on the cruise ship, and feel the romantic atmosphere of Guangzhou.

The above is a two day and one night travel plan for Guangzhou, hoping to be helpful to you!

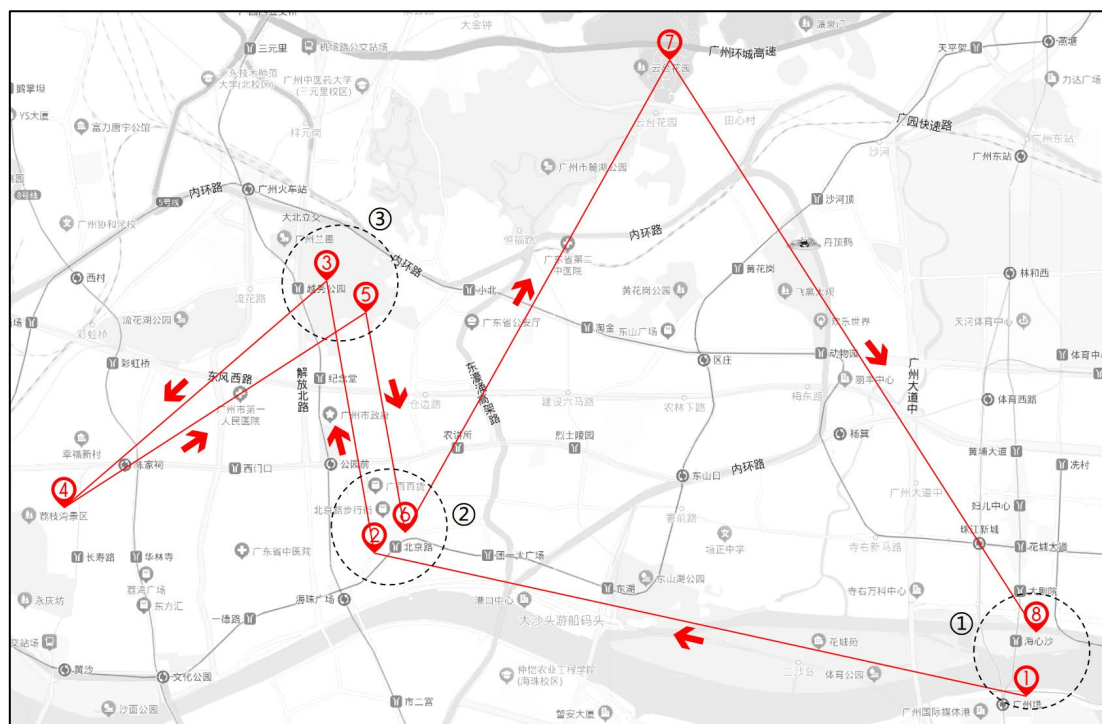
In the above-mentioned tourism plan provided by ChatGPT, a total of 16 locations were identified, including 8 scenic spots and 8 transportation hub stations. According to the actual retrieval of Baidu Maps (the retrieval time is the same as the question and answer date, that is, April 13, 2023), the following errors are found: (i) The name of the subway “Tower Station” is incorrect, which should be “Canton Tower Station”; (ii) The subway “Beijing Lu Station” is not on Line 1, but on Line 6; (iii) The subway stations “Liwan Plaza Station” and “Guangzhou Museum Station” are two fictional station names that do not actually exist; (iv) As a time-honored brand, “Tao Tao Ju” has many branches in Guangzhou, but there is no branch near the subway “Huangsha Station”, and the nearest “Tao Tao Ju” is 3.5 kilometers away; (v) The subway “Zhujiang New Town Station” is at the intersection of Line 3 and Line 5, not Line 3 and Line 6, and the “Zhujiang New Town station” is not the nearest subway station to the wharf along the “Pearl River Night Cruise”. Regarding ChatGPT’s introduction to various tourist attractions, especially the Guangzhou Tower and Yuexiu Park, which both use the highest level of rhetoric (i.e. “China’s tallest TV Tower” and “one of Guangzhou’s largest urban parks”), although the information was found to be true after verification, it is interesting that when asked about ChatGPT’s “China’s tallest



TV Tower”, the response was “Changchun TV Tower”, which is clearly contradictory.

Draw a brake line on the map according to the travel plan provided by ChatGPT, as shown in Figure 2. The red circle code in the figure represents the location and order of the scenic spots recommended by ChatGPT (because the location of “Tao Tao Ju” and “the Pearl River Night Cruise” is wrong, the nearest position to the speculated point was chosen to replace them), and the red line and red arrow represent the moving line and direction. It is not difficult to see that there are significant problems with this tourism route. First, the distance between the front and rear scenic spots leads to the problem of traffic time consumption. Taking “⑤-⑥-⑦-⑧” (red circle code) as an example, according to the navigation suggestions provided by Baidu Maps, the total time of public transportation (including subway and bus) on the road is more than 3 hours. Considering the time limit for opening the museum and the suggested length of visit, as well as the length of queuing and waiting at the dining place, the journey will be too tight, This in turn affects the tourism experience. Secondly, there is the problem of route repetition in the two days before and after. As shown in the figure, the three round dotted boxes ①②③ (black circle code) are adjacent to each other (actually within walking distance), but they are not allocated to the same day, which will waste time and cost, and will also greatly affect the tourism experience.

Figure 2: Schematic diagram of the movement line corresponding to the generated tourism plan by ChatGPT



## Study Scenario: using ChatGPT to design research plan

As soon as ChatGPT was released, it caused a strong response in the academic community, with scholars using it to write abstracts or generate references. In response, Nature has published two articles exploring the impact of ChatGPT on the academic community. The article mentions that although AI assisted research activities have become a trend, how to avoid the use and dissemination of false information generated by generative models during the use process is currently a challenge. In addition, ChatGPT may also involve risks such as information leakage, harmful speech, and copyright disputes (Stokel-Walker & Van-Noorden 2023; Van-Dis 2023).

Send a request to ChatGPT, “I would like to study the application prospects of artificial intelligence technology in library science. Please help me write a research plan and attach possible references or websites.” The following is the content of ChatGPT’s response:

Here is a possible research plan and references or website:

Research Plan:

Understand the current application status and development trends of artificial intelligence technology in library science;

Discuss the application prospect of AI technology in library service, knowledge management, Document retrieval, etc;

Analyze the problems and challenges of artificial intelligence technology in library science, and propose solutions;

Attempt to design and implement a library service system based on artificial intelligence technology, and conduct experiments and evaluations.

References and website:

Xiao, J., Zhang, X. M., & Dong Xiaohang. (2019). Artificial intelligence and library science: Current situation, problems, and prospects. *Library and Information Service*,63(19),83-88.

Zhang, S. (2020). Exploring the development path of library services in the age of artificial intelligence. *Information And Documentation Services*,41(1),68-71.

Zhou, W., Xu, C. B., Zhang, Y. (2021). The integration of artificial intelligence and digital library: Development status, technical framework, and future prospects. *Information Studies:Theory & Application*,44(1),26-32.

Andrew, N. (2020). Machine Learning course Coursera. <https://www.coursera.org/learn/machine-learning>.

TensorFlow - <https://www.tensorflow.org/>

PyTorch - <https://pytorch.org/>

Keras - <https://keras.io/>

Udacity AI courses - <https://www.udacity.com/course/artificial-intelligence-nanodegree--nd898>



In ChatGPT's response, three Chinese references and five available websites were provided, among which three references and one website had errors. The comparison of the content is shown in [Table 1](#).

Table 1: Comparison of Authenticity of References and URLs Generated by ChatGPT

ChatGPT generated content	Actual content after verification
Xiao, J., Zhang, X. M., & Dong Xiaohang. (2019). Artificial intelligence and library science: Current situation, problems, and prospects. <i>Library and Information Service</i> ,63(19),83-88.	Wang, P., Mou, D. M., Fa, H., et al. (2019). The construction of training target and knowledge ecosystem of medical intelligence talents. <i>Library and Information Service</i> ,63(19),81-87. Wang, J. Y., Li L., & Chen L. T. (2019). Research on the progress of academic publishing literacy education curriculum in foreign university libraries. <i>Library and Information Service</i> ,63(19),88-95.
Zhang, S. (2020). Exploring the development path of library services in the age of artificial intelligence. <i>Information And Documentation Services</i> ,41(1),68-71.	Qian, M. H., & Xu, Z. X. (2020). Measurement, cause and evolution of information stickiness in virtual knowledge community: a research framework. <i>Information And Documentation Services</i> ,41(1),58-68. Zhou, Y. (2020). The risks and control of social co governance in public information services. <i>Information And Documentation Services</i> ,2020,41(1):69-78.
Zhou, W., Xu, C. B., Zhang, Y. (2021). The integration of artificial intelligence and digital library: Development status, technical framework, and future prospects. <i>Information Studies:Theory &amp; Application</i> ,44(1),26-32.	Sun, W. L., Wang D. B., Liu, L., et al. (2021). Investigation and analysis of information science education and talent cultivation from the perspective of educators. <i>Information Studies:Theory &amp; Application</i> ,44(1),18-26. Zhou, H., Peng, Q. L., Wang, D. B., et al. (2021). Survey and analysis of information science education and talent cultivation from the perspective of employers. <i>Information Studies:Theory &amp; Application</i> ,44(1),27-35,7.
Udacity AI Courses - <a href="https://www.udacity.com/course/artificial-intelligence-nanodegree--nd898">https://www.udacity.com/course/artificial-intelligence-nanodegree--nd898</a> .	Udacity AI Courses - <a href="https://www.udacity.com/course/ai-artificial-intelligence-nanodegree--nd898">https://www.udacity.com/course/ai-artificial-intelligence-nanodegree--nd898</a> .

After verification, it was found that the reference content generated by ChatGPT is highly confusing. The listed journals are all real and well-known in the field of graphics and information. The corresponding annual issue of the journal is authentic

and verifiable, but the actual content is purely fictitious. In terms of website addresses, ChatGPT can mimic the naming convention of websites to generate fake websites. In this example, although the generated fake website cannot be opened, it was found through searching the real website that Udacity provided a course called “Expand Your Knowledge of Artistic Intelligence”, and the real course website was only two letters different from the fake website provided by ChatGPT. The mixed expression of true and false information makes users more inclined to believe in the authenticity of the provided content, which may interfere with users’ subsequent information analysis steps and hinder their ability to distinguish information.

### **Work Scenario: using ChatGPT to generate product evaluation**

One of the advantages of ChatGPT is its ability to generate a large amount of high-quality text in a short period of time, but in some work scenarios that require professional support, this advantage actually poses difficulties for ordinary users in information screening. Shortly after the release of ChatGPT, Stack Overflow, a question and answer website for programmers, announced the ban on answers generated by ChatGPT within the community. This is because the average rate of obtaining correct answers from ChatGPT is too low, so publishing answers created by ChatGPT is very harmful to the website and users who ask and find the correct answers ([Stack Overflow 2022](#)). In addition, due to the fact that these answers require detailed reading by someone with professional knowledge to determine their authenticity, the large number of answers generated by ChatGPT can undermine users’ trust in the website and may even guide users to use incorrect codes, resulting in adverse effects ([Vigliarolo 2022](#)).

Send a request to ChatGPT to “Please help me write five positive reviews about X brand cosmetics.” The following is the content of ChatGPT’s response.

1. I have been using cosmetics of brand X for a long time, and I can feel the improvement of my skin every time I use it, especially the essence, which is really very effective.
2. X brand cosmetics are really great! I particularly like that BB cream. Its light and thin texture can effectively cover blemishes without making the skin feel oppressed.
3. I have been using X brand cosmetics for a long time, and I can feel its excellent quality every time. Especially the lipstick, which has a very positive color and a long-lasting application.
4. I have sensitive skin and using many brands of cosmetics can easily cause skin allergies. But I don’t have any problems using X brand cosmetics, it’s really amazing!
5. X brand cosmetics are really great! My favorite is that eye shadow, which is very beautiful in color. It also shows color when painted, and has a very good durability.

Without providing any details, ChatGPT not only generated favorable comments for the cosmetics of brand X, but also added many details, such as the efficacy of brand X's essence, BB cream, lipstick and eye shadow products. In the fourth article, ChatGPT also added sensitive muscle user experience, which is almost indistinguishable from the evaluation of real users. In subsequent testing, ChatGPT was required to generate 100 positive reviews of X product by inputting instructions, and all the reviews were collected within 10 minutes. Through manual reading of the copy, it was found that although there may be some repetitive content, the copy provided by ChatGPT still has rich details and a smooth tone. It can be imagined that if a large amount of content generated by ChatGPT is placed on a website based on user feedback, the pollution caused by excessive information noise will seriously interfere with the overall information quality, thereby greatly affecting user information screening behavior.

## **Risk avoidance strategies from the perspective of information literacy**

By designing typical questions in life, study, and work scenarios, and conducting interactive experiments with ChatGPT, it was found that ChatGPT poses risks in practical applications such as fabricating false information, fabricating information sources, and undermining information ethics. In view of the above risks, it is imperative to improve information literacy. Improving information awareness, enhancing information capability, and adhering to information ethics are important means. Information literacy will play a key role in the ChatGPT era.

### **Enhance information awareness and discern the authenticity of information**

In the context of the digital age, the generation, dissemination, and acquisition of information have become easier and faster. However, at the same time, a large number of information noises are generated, such as the wrong location information given by ChatGPT in the tourism plan, the false references fabricated in the research plan, etc., which have caused serious Information pollution and interfered with users' extraction of effective information. Therefore, how to improve one's information awareness and distinguish the true and false advantages and disadvantages of information has become a basic skill that citizens in the information society must master. On the one hand, improving information awareness requires users to have a keen perception of information, be able to quickly locate and filter information, and timely and accurately capture valuable information. On the other hand, it is necessary to develop critical thinking skills, have the awareness of identifying the credibility of information in the first place, and be able to actively search for relevant information to seek evidence. At the same time, when distinguishing the authenticity of information, one should always adhere to objective and scientific principles, and not be influenced by personal biases and emotions. We also need to constantly use logical thinking and

reasoning skills to repeatedly analyze and evaluate information, in order to draw correct conclusions step by step.

In the era of information explosion, we need to pay special attention to the authenticity and reliability of information. Therefore, it is particularly important to develop the habit of verifying information sources. By verifying the source of information, we can assess the authenticity and reliability of the information and avoid making incorrect decisions due to errors or deviations in the information source. The reliability of information sources can be tested from multiple perspectives, such as examining factors such as the person responsible for generating the information, the timing and platform of information release, and the professionalism of the content. Especially for the highly confusing fictional references and fake website links generated by ChatGPT mentioned earlier, we need to be vigilant and verify them through multiple channels. At the same time, we can also verify the authenticity of information by searching for reports from other media or authoritative institutions. Therefore, it is crucial to make good use of information retrieval techniques and continuously improve information capabilities. Only with proficient information skills can one quickly and accurately verify information sources based on awareness and habits, greatly saving time and energy costs.

### **Adhere to information ethics and maintain the information ecosystem**

Information ethics refers to the basic moral and behavioral standards that people should follow throughout the entire lifecycle of information generation, processing, and dissemination, including protecting privacy and security, maintaining intellectual property rights, and avoiding misleading information; To maintain the information ecology is to protect the health and stability of the information environment and avoid the increase of information noise and Information pollution. Adhering to information ethics and avoiding the dissemination of false and false information is crucial for maintaining the health information ecosystem. At the same time, it is also necessary to strengthen the supervision of the information ecosystem, crack down on the dissemination and release of harmful information, and severely punish behaviors that damage the information ecosystem such as AI generating false positive reviews in bulk. In short, adhering to information ethics and maintaining the information ecosystem are important tasks that must be faced in the field of information resource management in the digital era. Only by continuously consolidating the foundation of information ethics can we establish a healthy, stable, reliable, and sustainable information ecosystem and information environment, thereby better serving the public and promoting social development.

Currently, there are no internationally recognized guidelines or related standards for AIGC applications, and there is still a gray area in the application and development process of ChatGPT. On April 11, 2023, the Cyberspace Administration of China of China drafted the Administrative Measures for Generative AI Services (Draft for Comments) and solicited public opinions from the whole society, aiming to promote

the healthy development and standardized application of AI generation technology (CAC 2023), which is an important attempt to move towards AIGC regulation in China. However, until relevant laws and regulations are established and improved, citizens' own information ethics standards are still the key line of defense to avoid the risks they bring. As the "first responsible person" for personal information security, every individual in the information society should not only screen information and avoid interference from false information, but also adhere to information ethics, curb its dissemination and diffusion, and jointly maintain a good information ecology.

## Conclusion

ChatGPT is a language Generative model based on deep learning and Natural language processing technology. It can not only generate smooth and coherent text, but also understand and process text in various ways. Once launched, it has become popular all over the world. The emergence of ChatGPT marks the arrival of the era of universal artificial intelligence, which also means that artificial intelligence has broader learning capabilities and more intelligent program logic. However, in practical interactions, it has also been found that the risks brought by the defects of generative artificial intelligence also bring many difficulties and challenges. When using ChatGPT for text generation, it may generate inaccurate, incomplete, or misleading text, which can affect users' decision-making behavior. Meanwhile, as ChatGPT's responses are generated based on a large amount of training data, it may lack human emotions and judgment, leading to inappropriate responses or suggestions. Therefore, having a high level of information literacy is the key to identify and avoid these application risks. To achieve this goal, it is indispensable to enhance information awareness, improve information capabilities, and adhere to information ethics. In the future, with the continuous development and innovation of artificial intelligence technology, the importance of information literacy will become increasingly prominent. Therefore, we need to constantly improve our information literacy level, strengthen our cognition and understanding of AI technology, constantly explore and innovate, and promote the application and development of AI technology in various fields to achieve better human-computer collaboration and social development.

## References

- Brewster, J., Arvanitis, L., & Sadeghi, M. (2023). The Next Great Misinformation Superspreader: How ChatGPT Could Spread Toxic Misinformation At Unprecedented Scale. Retrieved April 12, 2023, from <https://www.newsguardtech.com/misinformation-monitor/jan-2023/>.
- Bubeck, S., Chandrasekaran, V., Eldan, R., Gehrke, J., Horvitz, E., Kamar, E., Lee, P., Lee, Y. T., Li, Y. Z., Lundberg, S., Nori, H., Palangi, H., Ribeiro, M. T., & Zhang,

- Y. (2023). Sparks of artificial general intelligence: early experiments with GPT-4. Retrieved April 7, 2023, from <https://arxiv.org/abs/2303.12712>.
- CAC. (2021). Action plan for improving digital literacy and skills for the whole people. Retrieved April 12, 2023, from [http://www.cac.gov.cn/2021-11/05/c\\_1637708867754305.htm](http://www.cac.gov.cn/2021-11/05/c_1637708867754305.htm).
- CAC. (2023). Notice of the CAC on the public consultation of the administrative measures for generative artificial intelligence services (draft). Retrieved April 18, 2023, from [https://mp.weixin.qq.com/s/2-qP6qc\\_8NigbP7djv2k0w](https://mp.weixin.qq.com/s/2-qP6qc_8NigbP7djv2k0w).
- Cao, Y. H., Li, S. Y., Liu, Y. X., Yan, Z. L., Dai, Y. T., Yu, P. S., & Sun, L. C. (2023). A comprehensive survey of AI-Generated Content (AIGC): a history of generative AI from GAN to ChatGPT. Retrieved April 14, 2023, from <https://arxiv.org/abs/2303.04226>.
- CBC News. (2023). AI application ChatGPT temporarily banned in Italy over data collection concerns. Retrieved April 7, 2023, from <https://www.cbc.ca/news/world/italy-openai-chatgpt-ban-1.6797963>.
- Christiano, P., Leike, J., Brown, T. B., Martic, M., Legg, S., & Amodei, D. (2017). Deep reinforcement learning from human preferences. Retrieved April 14, 2023, from <https://arxiv.org/abs/1706.03741>.
- CILIP. (2018). Definition of information literacy 2018. Retrieved April 12, 2023, from <https://infolit.org.uk/ILdefinitionCILIP2018.pdf>.
- Devlin, J., Chang, M. W., Lee, K., & Toutanova, K. (2018). Bert: pre-training of deep bidirectional transformers for language understanding. Retrieved April 14, 2023, from <https://arxiv.org/abs/1810.04805>.
- Forbes. (2023). ChatGPT in schools: here's where it's banned—and how it could potentially help students. Retrieved April 7, 2023, from <https://www.forbes.com/sites/ariannajohnson/2023/01/18/chatgpt-in-schools-here-s-where-its-banned-and-how-it-could-potentially-help-students/?sh=3769eb266e2c>.
- Fortune. (2023). A major bank has banned ChatGPT—should your company follow suit?. Retrieved April 7, 2023, from <https://fortune.com/2023/02/24/major-bank-banned-chatgpt/>.
- He, Z., Zeng, R. X., Qin, W., Zheng, L., Zhang, H., Zhang, X. Y., Ma, L., Zhai, Y., Pan Y. L., Li, X. F., Peng, Y., & Zhang, N. (2023). The social impact and governance of new generation artificial intelligence technologies such as ChatGPT. *E-Government*, 19(4), 2-24. [http://news.sohu.com/a/665727602\\_121123712](http://news.sohu.com/a/665727602_121123712).
- Ji, Z. W., Lee, N., Frieske, R., Yu T., Su, D., Xu, Y., Ishii, E., Bang, Y. J., Dai, W. L., Madotto, A., & Fung, P. (2022). Survey of hallucination in natural language generation. *ACM Comput. Surv.*, 55(12):1-38. <https://arxiv.org/abs/2202.03629>.
- OpenAI. (2022). ChatGPT: Optimizing language models for dialogue. Retrieved March 12, 2023, from <https://openai.com/blog/chatgpt/>.



- Pan, Y. T. (2018). Creating the three reality scenes content system for information literacy in general education. *Library Development*,40(4),106-111.  
<https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44YLTIOAiTRKibYIV5Vjs7i0-kJR0HYBJ80QN9L51zrP5lsYmMgiAP382qfnRVZ7n12bT2zPLcT5AkAOOme9QC7&uniplatform=NZKPT>.
- Pan, Y. T., & Ban, L. N. (2022). A major leap from information literacy to digital literacy for all. *Library Journal*,41(10),4-9.  
[https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44YLTIOAiTRKibYIV5Vjs7iJTKGjg9uTdeTsOI\\_ra5\\_XYWUqKGHEWwTRgDbvbvbgp3e9xJgRrOjThEaMGZawb3rs1&uniplatform=NZKPT](https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44YLTIOAiTRKibYIV5Vjs7iJTKGjg9uTdeTsOI_ra5_XYWUqKGHEWwTRgDbvbvbgp3e9xJgRrOjThEaMGZawb3rs1&uniplatform=NZKPT).
- Pan, Y. T., & Chen, X. (2017). Integrative construction of MOOCs & textbooks of “General tutorial in information literacy & information retrieval”. *Library Work in Colleges and Universities*,37(4),5-8.  
[https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44YLTIOAiTRKibYIV5Vjs7iAEhECQAQ9aTiC5BjCgn0Rs0H0s9TrKuxHqkhaS5-uOoXGHgW-Lrb\\_nuLaB4u\\_hEb&uniplatform=NZKPT](https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44YLTIOAiTRKibYIV5Vjs7iAEhECQAQ9aTiC5BjCgn0Rs0H0s9TrKuxHqkhaS5-uOoXGHgW-Lrb_nuLaB4u_hEb&uniplatform=NZKPT).
- Pan, Y. T., & Li, L. Y. (2017). Theoretical innovation and practices of general education in information literacy. *Library Journal*,36(12),45-53.  
[https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44YLTIOAiTRKibYIV5Vjs7i0-kJR0HYBJ80QN9L51zrP\\_v7xtG5SCoi1y4YEQDeYSG5A7hiXlCKLOklmYqAxIQi&uniplatform=NZKPT](https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44YLTIOAiTRKibYIV5Vjs7i0-kJR0HYBJ80QN9L51zrP_v7xtG5SCoi1y4YEQDeYSG5A7hiXlCKLOklmYqAxIQi&uniplatform=NZKPT).
- Qian, L., Liu, Y., Zhang, Z. X., Li, X. S., Xie, J., Xu, Q., Li, Y., Guan, Z. Y., Li, X. Y., & Wen, S. (2023). Analysis of the technical basis of ChatGPT. *Data Analysis and Knowledge Discovery*.  
<http://kns.cnki.net/kcms/detail/10.1478.G2.20230324.1112.002.html>.
- Radford, A. (2018). Improving language understanding by generative pre-training. Retrieved April 14, 2023, from  
<https://openai.com/research/language-unsupervised>.
- Reuters. (2023). ChatGPT sets record for fastest-growing user base - analyst note. Retrieved April 7, 2023, from  
<https://www.reuters.com/technology/chatgpt-sets-record-fastest-growing-user-base-analyst-note-2023-02-01/#:~:text=It%20took%20TikTok%20about%20nine,to%20data%20from%20Sensor%20Tower>.
- Sina Finance. (2023). Zhiyou.com announces new ChatGPT function to assist passengers in developing travel plans. Retrieved April 13, 2023, from  
<https://cj.sina.com.cn/articles/view/5115326071/130e5ae7702001w2ka>.
- Stack Overflow. (2022). Temporary policy: ChatGPT is banned. Retrieved April 14, 2023, from  
<https://meta.stackoverflow.com/questions/421831/temporary-policy-chatgpt-is-banned>.
- Stokel-Walker, C., & Van-Noorden, R. (2023). What ChatGPT and generative AI mean for science. Retrieved April 13, 2023, from

<https://www.nature.com/articles/d41586-023-00340-6>.

Van-Dis E. A. M., Bollen, J., Zuidema, W., Van-Rooij, R., & Bockting, C. L. (2023). ChatGPT: five priorities for research. Retrieved April 13, 2023, from <https://www.nature.com/articles/d41586-023-00288-7>.

Vaswani, A., Shazeer, N., Parmar, N., Uszkoreit, J., Jones, L., Gomez, A. N., Kaiser, L., & Polosukhin, I. (2017). Attention is all you need. Retrieved April 14, 2023, from <https://arxiv.org/abs/1706.03762>.

Vigliarolo, B. (2022). Stack Overflow bans ChatGPT as “substantially harmful” for coding issues. Retrieved April 14, 2023, from <https://www.msn.com/en-us/news/technology/stack-overflow-bans-chatgpt-as-substantially-harmful-for-coding-issues/ar-AA14VWSE>.

Wodecki, B. (2023). UBS: ChatGPT may be the fastest growing app of all time. Retrieved April 7, 2023, from <https://aibusiness.com/nlp/ubs-chatgpt-is-the-fastest-growing-app-of-all-time>.