

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

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Information Literacy & Digital Literacy

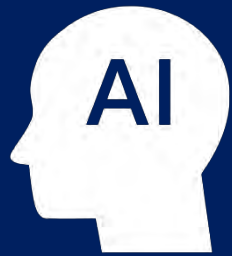


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Nature Language Processing, NLP

Introduction



AIGC



ChatGPT



High quality dialogue

Great imitation ability

Excellent contextual ability

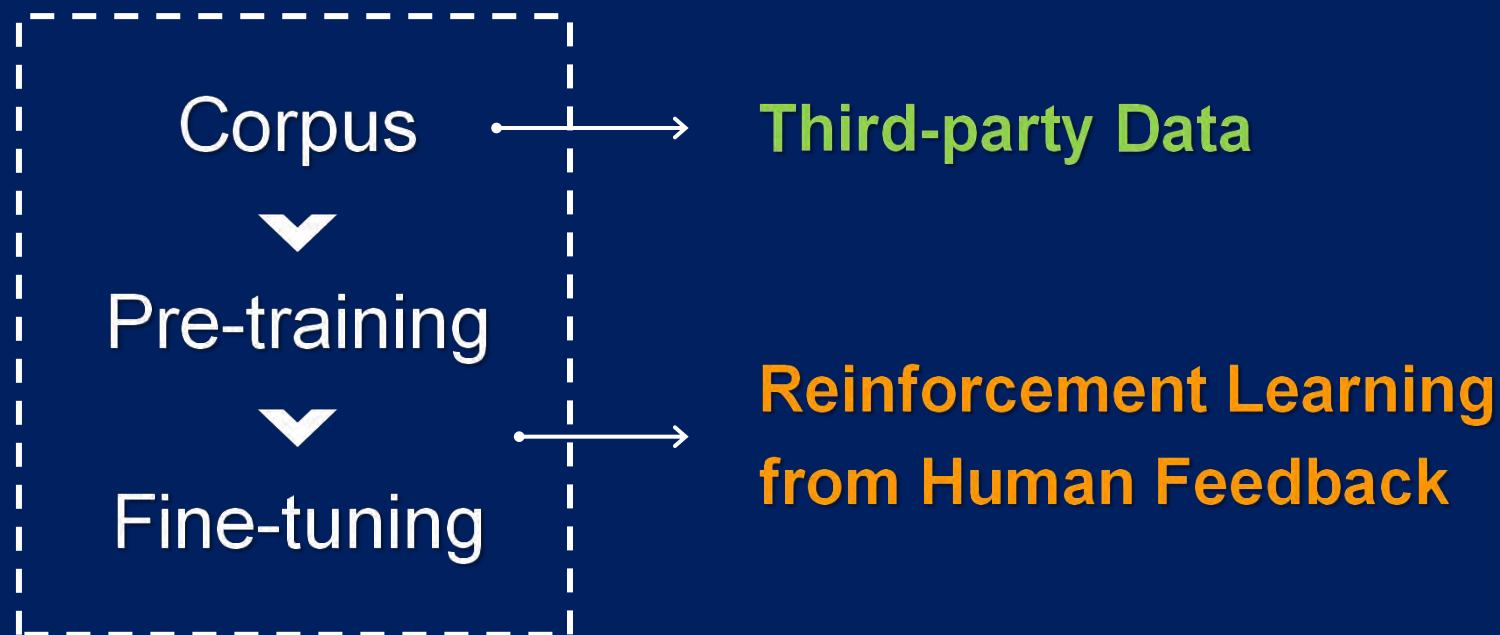


Information fraud

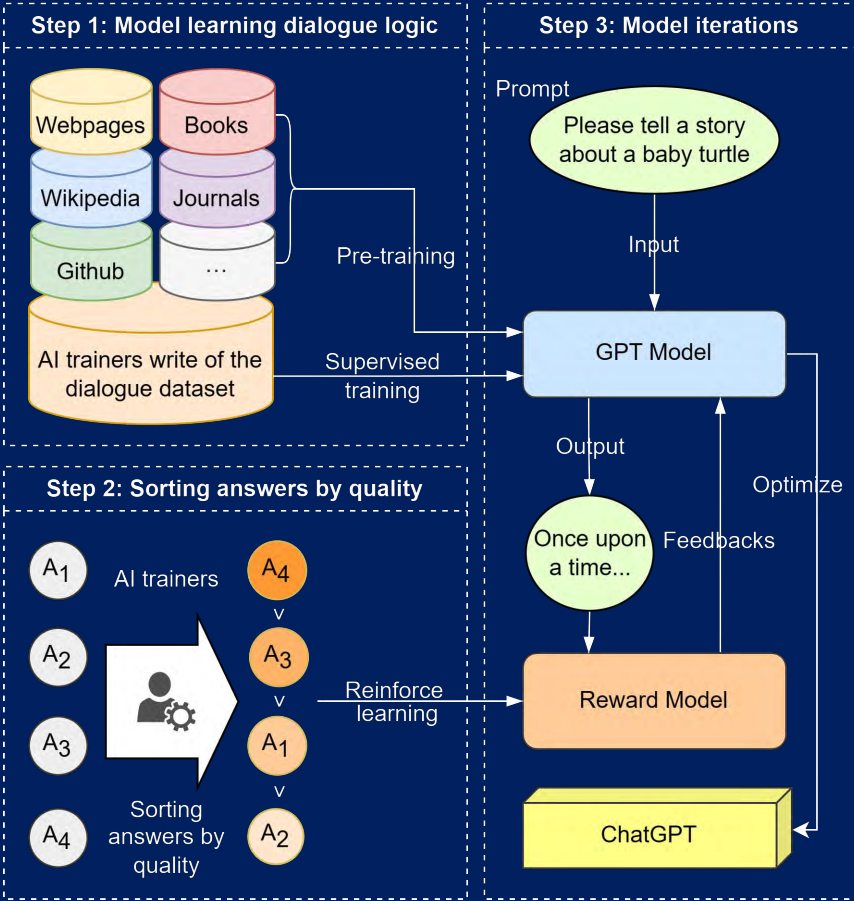
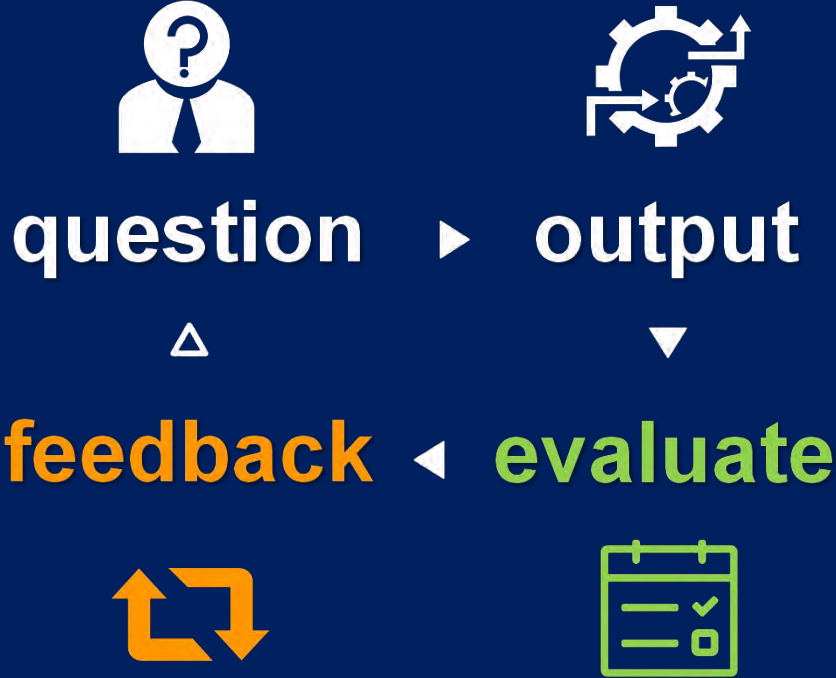
Data breach

Ethical risks

Language Generation Logic of ChatGPT and Its Defects



Language Generation Logic of ChatGPT and Its Defects



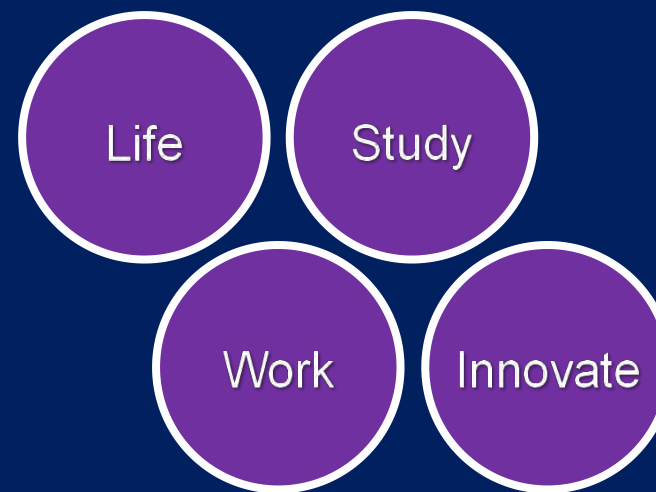
Language Generation Logic of ChatGPT and Its Defects

~~FACT~~

ANSWER

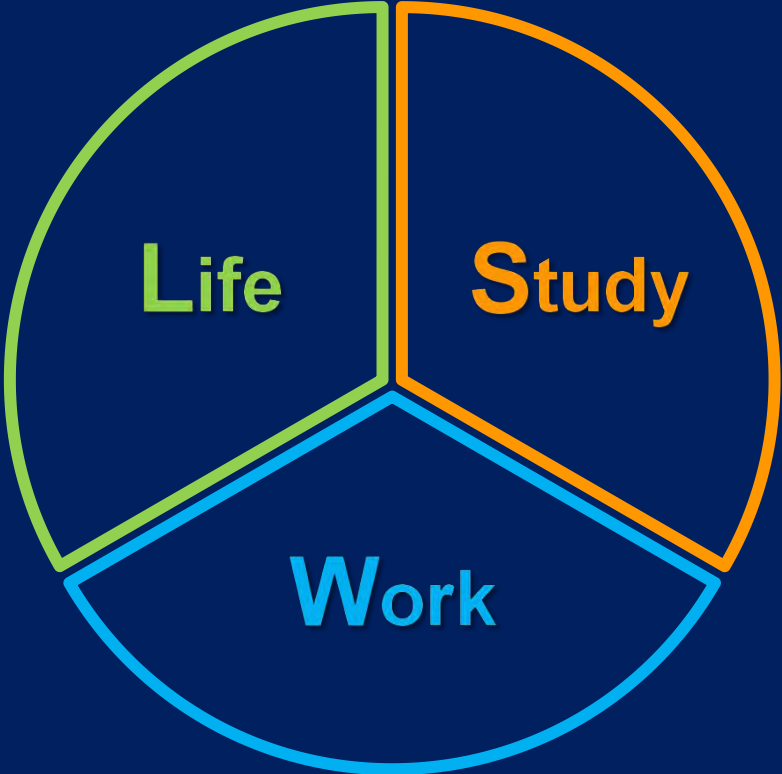


Scenario-based Application Examples of ChatGPT and Its Potential Risks



Scenario-based Application Examples of ChatGPT and Its Potential Risks

Playing
Eating
Transportation
Real Estate
Shopping
Medical
Traveling



Environment Resource
Academic Research
Job-hunting Marketing
Business Skills Outreach

Scenario 1st : Life [tourism strategy]



“Revenge Consumption”
“Special Forces-style Tourism”



Credit: Getty Images

Scenario 1st : Life [tourism strategy]

Please **develop a 'two day and one night' tourism plan for Guangzhou**, which requires detailed time planning, location and introduction, route arrangement, etc.



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

Day 1:

Morning: You can go to Canton Tower ("Tower Station" on 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" on Line 1), 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" on 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.

Scenario 1st : Life [tourism strategy]



Accuracy

Rationality

- Is the information provided by ChatGPT **correct** ?
- Is the route and schedule designed by ChatGPT **reasonable** ?
- Is the overall tourism plan provided by ChatGPT **practical & feasible** ?

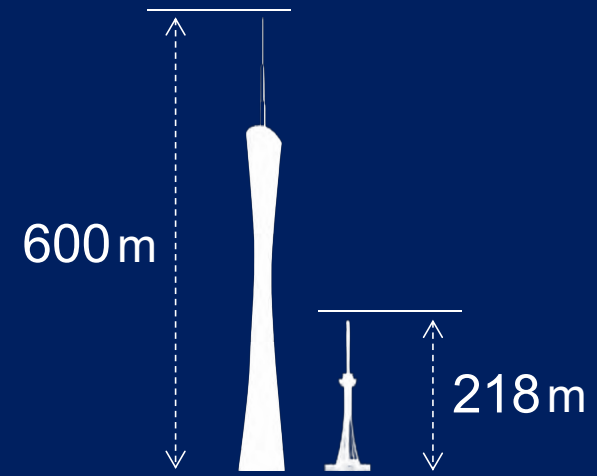
Scenario 1st : Life [tourism strategy]

Day 1:

“Canton Tower Station”

Morning: You can go to Canton Tower (“Tower Station” on 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” on Line 1), “L6”, 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.



Canton Tower vs Changchun Tower

Scenario 1st : Life [tourism strategy]

Day 1:

Afternoon: In the afternoon, you can go to Yuexiu Park (“Yuexiu Park Station” on Metro 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~~” on Metro 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.



Scenario 1st : Life [tourism strategy]

Day 2:

Morning: In the morning, you can go to the Guangzhou Museum (**“Guangzhou Museum Station”** on Metro 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.

too far

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



Scenario 1st : Life [tourism strategy]

Day 2:

Afternoon: In the afternoon, you can go to Baiyun Mountain Scenic Spot (“Baiyun Culture Square Station” of Line 2), which is one of the famous natural scenic spots in Guangzhou. There are beautiful mountains, 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 X Station” on the transfer point 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.

“L5”



Pearl River Night Cruise

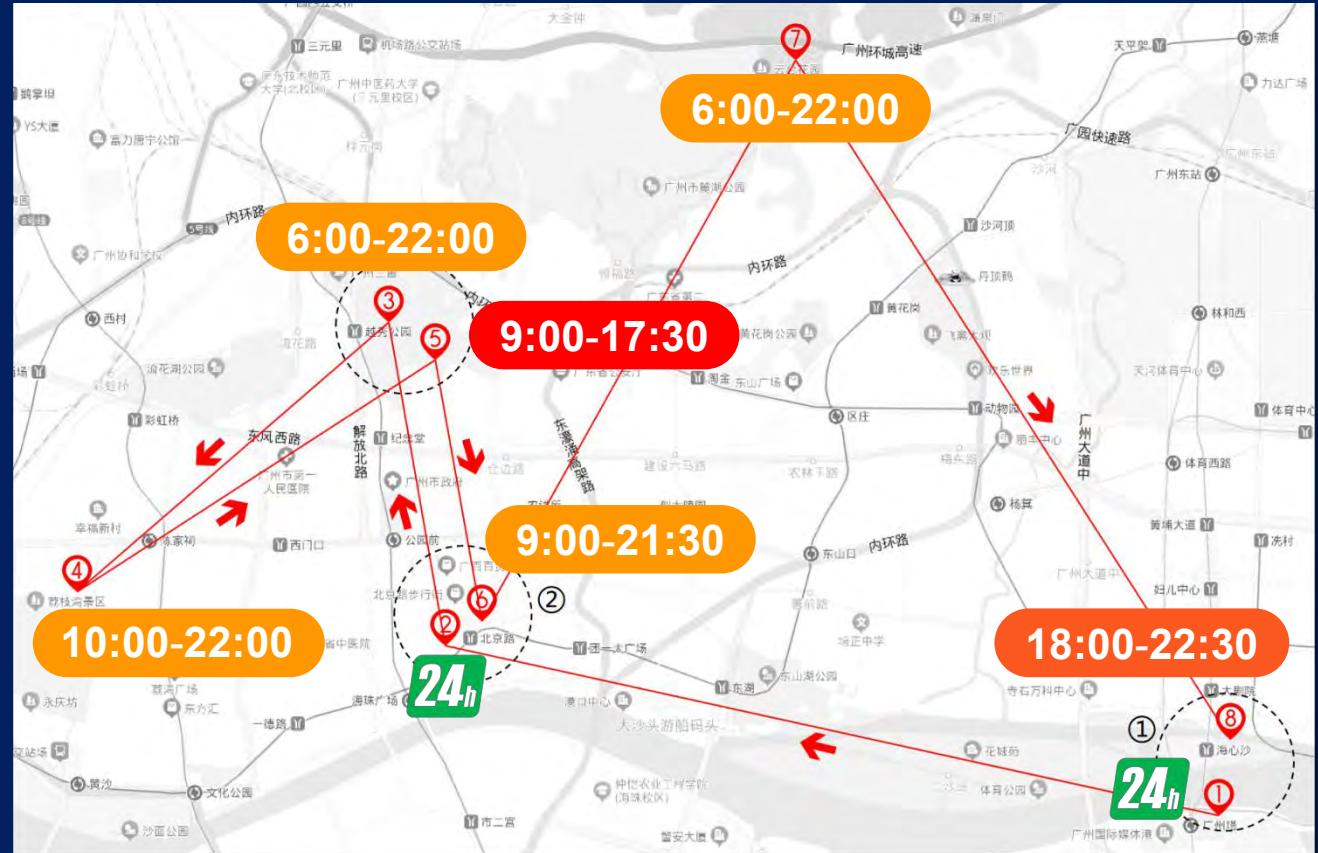


Scenario 1st : Life [tourism strategy]



Tight Schedule

- Duration of transportation on the road
- Visiting arrangements for adjacent locations
- Queue time at lunch locations
- Opening hours of cultural and museum institutions



Scenario 1st : Life [tourism strategy]

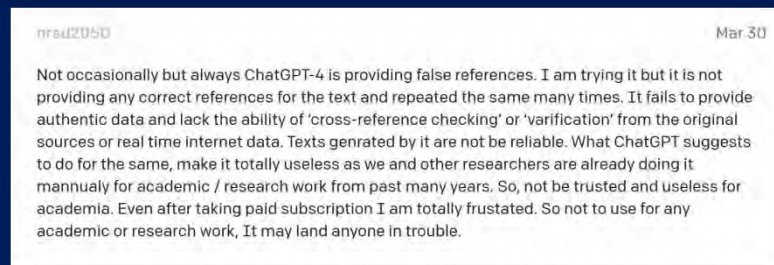
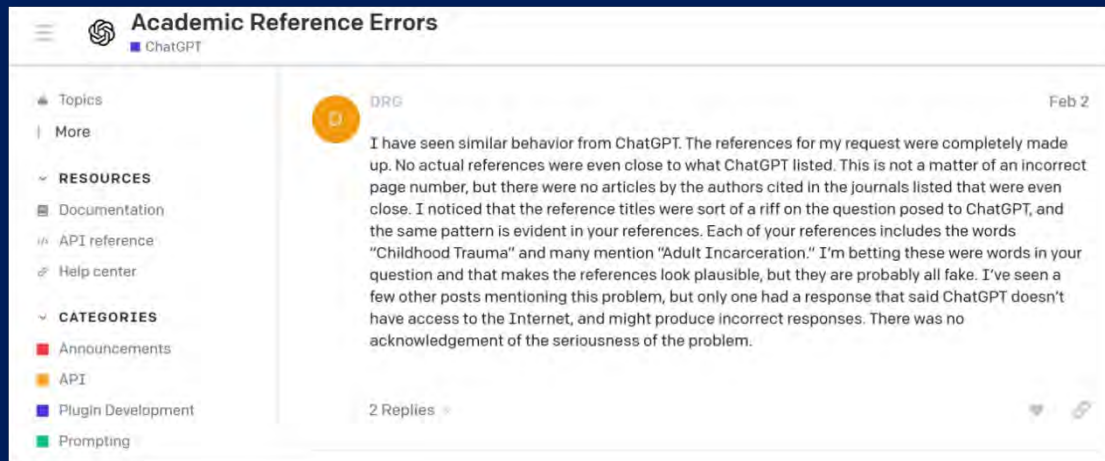
- Route repetition
- Unreasonable arrangement



- Waste of time
- Causing fatigue
- Losing the original meaning of travel



Scenario 2nd : Study [research plan]



<https://community.openai.com/t/academic-reference-errors/43080>



Pic Source: Duke University Libraries

Scenario 2nd : Study [research plan]

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**.



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.

Scenario 2nd : Study [research plan]



Scenario 2nd : Study [research plan]

ChatGPT generated content	Actual content after verification
<p>Xiao, J., Zhang, X. M., & Dong, X. H. (2019). Artificial intelligence and library science: current situation, problems, and prospects. Library and Information Service,63(19),83-88.</p>	<ul style="list-style-type: none"> • Wang, P., Mou, D. M., Fa, H., et al. (2019). The construction of training target and knowledge ecosystem of medical intelligence talents. Library and Information Service,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. Library and Information Service,63(19),88-95.
<p>Zhang, S. (2020). Exploring the development path of library services in the age of artificial intelligence. Information and Documentation Services,41(1),68-71.</p>	<ul style="list-style-type: none"> • Qian, M. H., & Xu, Z. X. (2020). Measurement, cause and evolution of information stickiness in virtual knowledge community: a research framework. Information And Documentation Services,41(1),58-68. • Zhou,Y. (2020). The risks and control of social co governance in public information services. Information and Documentation Services,2020,41(1):69-78.
<p>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.</p>	<ul style="list-style-type: none"> • 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. Information Studies: Theory & Application,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. Information Studies: Theory & Application,44(1),27-35,7.

Scenario 2nd : Study [research plan]

ChatGPT generated content	Actual content after verification
Udacity AI Courses - https://www.udacity.com/course/artificial-intelligenc-e-nanodegree--nd898 .	Udacity AI Courses - https://www.udacity.com/course/ai-artificial-intelligenc-e-nanodegree--nd898 .



Deceptive & misleading

- Journal is real and well-known.
- Year, volume, and issue are all real and testable.
- The substantive content is purely fictional.
- Mixing real and false content enhances confusion.

Misleading users to believe and cite completely non-existent fictional content.

Scenario 3rd : Work [product evaluation]

TheVerge

Stack Overflow, the go-to question-and-answer site for coders and programmers, has temporarily banned users from sharing responses generated by AI chatbot ChatGPT.

The site's mods said that the ban was temporary and that a final ruling would be made some time in the future after consultation with its community. But, as the mods explained, ChatGPT simply makes it too easy for users to generate responses and flood the site with answers that seem correct at first glance but are often wrong on close examination.

“The primary problem is [...] the answers which ChatGPT produces have a high rate of being incorrect.”

“The primary problem is that while the answers which ChatGPT produces have a high rate of being incorrect, they typically *look like they might* be good and the answers are *very* easy to produce,” wrote the mods (emphasis theirs). “As such, we need the volume of these posts to reduce [...] So, for now, the use of ChatGPT to

create posts here on Stack Overflow is not permitted. If a user is believed to have used ChatGPT after this temporary policy is posted, sanctions will be imposed to prevent users from continuing to post such content, even if the posts would otherwise be acceptable.”

Temporary policy: Generative AI (e.g., ChatGPT) is banned

Asked 7 months ago Modified 2 days ago Viewed 1.0m times



3872

Locked. Comments on this question have been disabled, but it is still accepting new answers and other interactions. [Learn more.](#)

All use of generative AI (e.g., [ChatGPT](#)¹ and other LLMs) is banned when posting content on Stack Overflow.

This includes “asking” the question to an AI generator then copy-pasting its output *as well as* using an AI generator to “reword” your answers.

Please see the Help Center article: [Why posting GPT and ChatGPT generated answers is not currently acceptable](#)

This is a temporary policy intended to slow down the influx of answers and other content created with ChatGPT and other generative AI technologies, typically using Large Language Models (LLM). What the final policy will be regarding the use of these and other similar tools is something that will need to be discussed with Stack Overflow staff and, quite likely, here on Meta Stack Overflow.

Overall, because the average rate of getting *correct* answers from ChatGPT and other generative AI technologies is too low, **the posting of answers created by ChatGPT and other generative AI technologies is *substantially harmful* to the site and to users who are asking questions and looking for *correct* answers.**

The primary problem is that while the answers which ChatGPT and other generative AI technologies produce have a high rate of being incorrect, they typically *look like* the answers *might* be good and the answers are *very* easy to produce. There are also many people trying out ChatGPT and other generative AI technologies to create answers, without the expertise or willingness to verify that the answer is correct prior to posting. Because such answers are so easy to produce, a large number of people are posting a *lot* of answers. The volume of these answers (thousands) and the fact that the answers often require a detailed read by someone with significant subject matter expertise in order to determine that the answer is actually bad has effectively swamped our volunteer-based quality curation infrastructure.

As such, we need to reduce the volume of these posts and we need to be able to deal with the ones which are posted quickly, which means dealing with users, rather than individual posts.


stackoverflow

Scenario 3rd : Work [product evaluation]

Please help me **write 100 positive reviews** about X brand cosmetics.



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.

.....

Scenario 3rd : Work [product evaluation]

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.
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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.
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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.



Scenario 3rd : Work [product evaluation]

1. Taking **specific** products as an example → giving people a sense of **authenticity**
2. Provided rich **details** → improved **reliability**
3. **Smooth** tone and clear description → Strengthen user **trust**



Risk avoidance strategies from the perspective of information literacy

Life

fabricate
false info.

Study

make up
fake source

Work

violate
ethics

Information knowledge, awareness, ability, ethics

Risk avoidance strategies from the perspective of information literacy

Digital age: the generation, dissemination, and acquisition of information have become **easier and faster**.



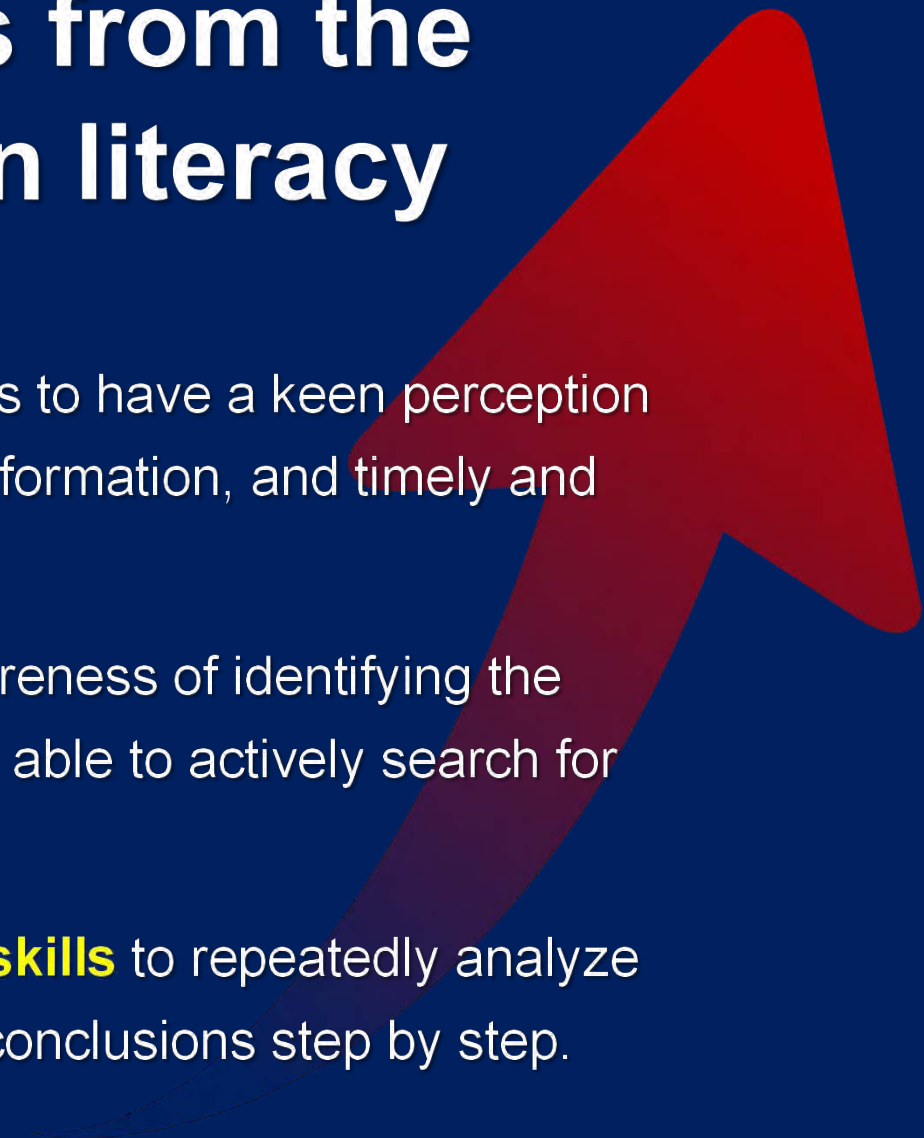
More information noises: such as the wrong location information given by ChatGPT in the tourism plan, the false references fabricated in the research plan, etc.



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.

Risk avoidance strategies from the perspective of information literacy

- **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.
 - **Develop critical thinking skills**: i) having the awareness of identifying the credibility of information in the first place, and ii) be able to actively search for relevant information to seek evidence.
 - **Constantly use logical thinking and reasoning skills** to repeatedly analyze and evaluate information, in order to draw correct conclusions step by step.
- 

Risk avoidance strategies from the perspective of information literacy

Develop the habit of **verifying/checking** information sources

Information Retrieval

- ✓ Time accurate?
- ✓ Content professional?
- ✓ Publisher authoritative?
- ✓ Platform authoritative?

Risk avoidance strategies from the perspective of information literacy



User Personal Privacy

Intellectual Property Rights (IPR)



Information Environment/Ecology

Stable + Reliable + Sustainable

Risk avoidance strategies from the perspective of information literacy



Measures taken by China to address the challenges of AIGC

生成式人工智能服务管理暂行办法

国家互联网信息办公室

中华人民共和国国家发展和改革委员会

中华人民共和国教育部

中华人民共和国科学技术部

中华人民共和国工业和信息化部

中华人民共和国公安部

国家广播电视总局

令

第15号

Interim Measures for the Management of AIGC Services (2023.8.15 come into force)

- Cyberspace Administration of China
- National Development and Reform Commission
- Ministry of Education
- Ministry of Science and Technology
- Ministry of Industry and Information Technology
- Ministry of Public Security
- State Administration of Radio, Film and Television

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Thank YOU!

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