

Asking Chatbase to learn about academic retractions

AISDL Team

Email: aisdl_team@mindsponge.info

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In this second experiment, we updated the data for the chatbot provided in [1] by uploading a new article [2] to the Chatbase server for learning.

Still, we would like to explore Chatbase's reading comprehension skills as well as its capabilities in delivering summarized or specifically extracted content from the provided article [2]. In addition, in our prompts given to Chatbase concerning the content of [2], we tried to learn if the AI could relate the read content to principles in [3-4].

We provide detailed conversations with Chatbase in what follows.

Prompt 1: What are the key lessons learned from this article?

Chatbase: The article discusses the importance of retractions in scientific research and suggests ways to improve the retraction process. The author argues that retractions are not inherently bad, but rather a practical way to correct mistakes and strengthen the scientific enterprise. The article suggests that making disclosure of shortcomings mandatory could prevent overstating a study's claims and that outlining four pieces of information with any retraction could prompt researchers and institutions to encourage retractions when warranted. The article also mentions a publication-integrity checklist that could help pinpoint problems without requiring a formal declaration of misconduct.

Prompt 2: Why do retractions happen more frequently?

Chatbase: The article mentions that the rate of retractions has increased worldwide over the past few years, but it does not provide a specific reason for this increase.

Prompt 3: Are systematic data about academic retractions useful?

Chatbase: Yes, systematic data about academic retractions are useful. The article argues that retractions are a practical way to correct for human fallibility and strengthen the scientific enterprise. By analyzing retraction data, researchers can identify patterns and trends in scientific misconduct and errors, which can help to improve the scientific process and prevent future mistakes. The author also suggests that making disclosure of shortcomings mandatory could prevent overstating a study's claims and help to reverse the idea that studies that seem 'conclusive' or 'clean' are more important than transparent research narratives.

Prompt 4: What does the article tell about research limitations and scientific humility?

Chatbase: The article argues that research limitations and scientific humility are important aspects of scientific research that should be acknowledged and communicated to the public. The author suggests that a formal statement of shortcomings should be included in research papers to prevent authors and the public from overstating a study's claims. The article also argues that retractions are not intrinsically bad, but rather a practical way to correct for human fallibility and strengthen the scientific enterprise. By acknowledging and correcting mistakes, researchers can demonstrate their honesty and self-correcting spirit, which can increase the public's understanding of how science works.

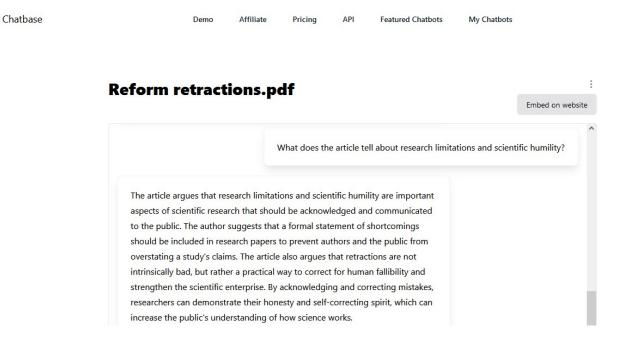


Figure 1. Chatbase explained the importance of scientific humility.

Prompt 5: Do academic retractions cause the costs of science to go up?

Chatbase: The article does not discuss whether academic retractions cause the costs of science to go up. Therefore, I cannot provide an answer to that question based on the given text.

Prompt 6: Suggest similar articles to this one!

Chatbase: Here are some similar articles to the one we have been discussing:

- 1. "The Importance of Retractions in Science" by Ivan Oransky and Adam Marcus, published in the Journal of the American Medical Association (JAMA) in 2011.
- 2. "Retraction Watch: Tracking Retractions as a Window into the Scientific Process" by Ivan Oransky and Adam Marcus, published in the Journal of Medical Internet Research in 2013.
- 3. "The Ethics of Retractions in Science: Past and Present" by Ferric C. Fang, R. Grant Steen, and Arturo Casadevall, published in the Journal of Clinical Investigation in 2012.
- 4. "Retractions in Science: A Bibliometric Analysis of Retraction Notices from the Web of Science" by Michael Grieneisen and Minghua Zhang, published in the journal Science and Engineering Ethics in 2012.
- 5. "Retractions in Scientific Research: A Systematic Review" by Ana Marusic, Ana Utrobicic, and Livia Puljak, published in the journal PLoS ONE in 2011.

For all the prompts from 1 to 4, Chatbase appears to have delivered satisfactory responses. Its answer to Prompt 5 is a little bit mechanic. And interestingly, similar to its suggestions in [1] for the last question, the AI provides all the non-existent document titles. Nonetheless, it is noteworthy that Chatbase has the capability to identify notable authors writing about the topic, including the co-founders of Retraction Watch, Ivan Oransky and Adam Marcus. It also provides correct journal titles that have published a significant number of academic articles dealing with the retractions topic.

References

[1] Team AISDL. (2023). Chatting with Chatbase over the rationality issue of the cost of science. <u>https://mindsponge.info/posts/175</u>

[2] Vuong QH. (2020). <u>Reform retractions to make them more transparent</u>. *Nature*, 582(7811), 149.

[3] Vuong QH. (2019). <u>Breaking barriers in publishing demands a proactive attitude</u>. *Nature Human Behaviour*, 3(10), 1034.

[4] Vuong QH. (2018). The (ir)rational consideration of the cost of science in transition economies. Nature Human Behaviour, 2(1), 5.



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