

### What?

Every December, the British Medical Journal (BMJ) publishes a ‘light-hearted’ Christmas issue featuring quirky articles. In 2021, researchers used Artificial Intelligence (AI) technology (Generative Pre-Trained Transformer 3 (GPT3)) to generate fake BMJ Christmas titles and examined their plausibility and attractiveness.<sup>1</sup>

### Why?

The use of AI is becoming increasingly more common in medicine, from diagnosis to doctor-patient communication.<sup>2</sup> To test if AI can generate medical research hypotheses, Marlow and Wood (2021) used 13 of the most read BMJ Christmas article titles as prompts for the GPT3 language model to generate its own quirky titles.<sup>1</sup>

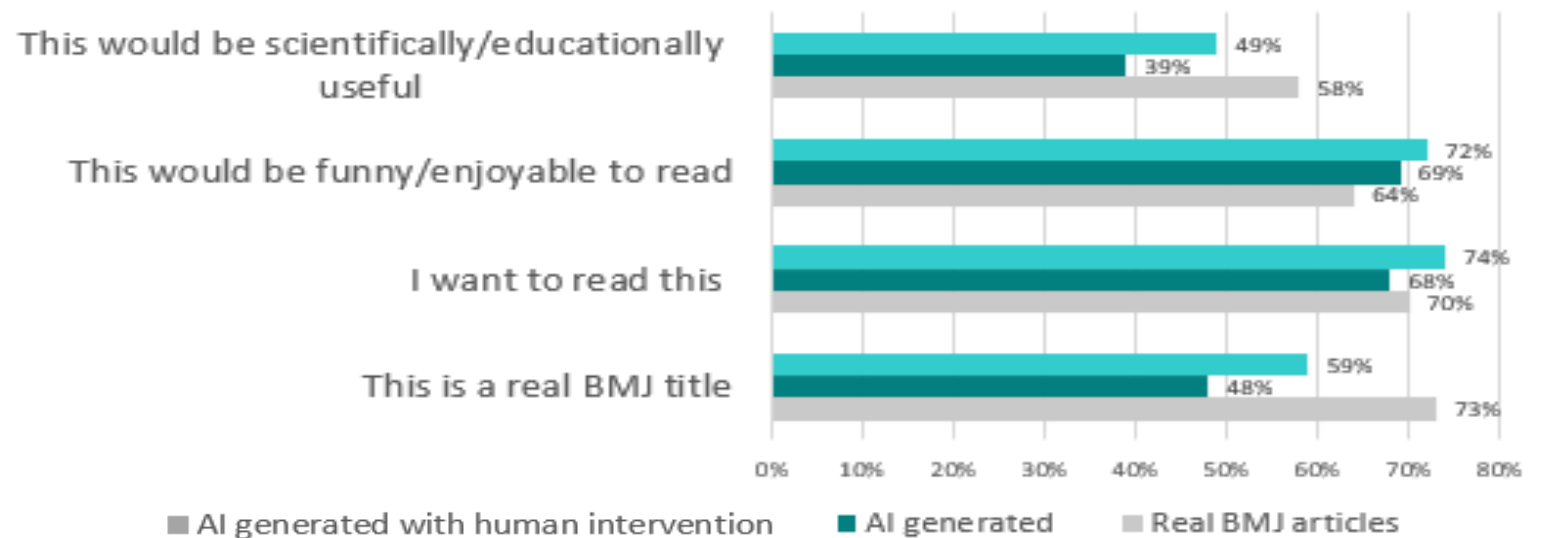
## Can you guess the AI generated title and the real published article?

**The survival time of chocolates on hospital wards: covert observational study**

**The effects of free gourmet coffee on emergency department waiting times: an observational study**

Results in Author Comments

Response to real BMJ titles compared to the 10 best and 10 worst AI generated titles and with human intervention<sup>1</sup>



### Who?

A sample of doctors (n = 25) rated the AI-generated titles as enjoyable and enticing to read. The real titles had significantly higher responses for educational usefulness and plausibility (graph above), although, when just examining the top 10 articles curated by humans, the ratings of the AI titles increased to 59% for plausibility and 49% for educational value.<sup>1</sup>

### Author Comments

Aside from a good laugh, this article provides an insight into how the GPT-3 language model<sup>3</sup> can take unpredictable prompts and generate attractive and (sometimes) plausible outputs, and how this can improve with the help of human intervention. By the way, the article on chocolate survival time is the real one from the BMJ - the median survival time of a chocolate was 51 minutes!<sup>4</sup>

### References

1. Marlow R, Wood D. Ghost in the machine or monkey with a typewriter - Generating titles for Christmas research articles in the BMJ using artificial intelligence: Observational study. *BMJ*. 2021;375:1–6.
2. Basu K, Sinha R, Ong A, Basu T. Artificial Intelligence: How is It Changing Medical Sciences and Its Future? *Indian J Dermatol* [Internet]. 2020;65(5):365–70
3. Brown *et al*. Language Models are Few-Shot Learners. *arXiv*. 2020. [arXiv:2005.14165v4](https://arxiv.org/abs/2005.14165v4)
4. Gajendragadkar PR, Moualed DJ, Nicolson PLR, Adjei FD, Cakebread HE, Duehmke RM, et al. The survival time of chocolates on hospital wards: Covert observational study. *BMJ* [Internet]. 2013;347(December):1–7.