

In search of the chatbot's linguistic fingerprint

JONAS NYGAARD BLOM, ALEXANDRA HOLSTING & JESPER TINGGAARD SVENDSEN

Chatbots have recently entered the educational system, creating opportunities but also challenges. A particularly pressing issue is the lack of a fully reliable method to trace if a text is written by a chatbot. This means, on the one hand, that students might use chatbots to write assignments undetected, and on the other hand, that students might be suspected of using chatbots even when they have not done so. In this study, we contribute to current research on the linguistic characteristics of chatbots by examining whether it is possible to distinguish linguistically between texts written by Danish students and ChatGPT. The results show that, generally – but not in every individual case – there are differences in the writing styles of the students and the chatbot. However, at the same time, it is possible to obscure the chatbot's linguistic fingerprint using supplementary prompts. This highlights the difficulty of tracing texts written by artificial intelligence. In conclusion, we discuss the implications of this for Danish educational institutions.

KEYWORDS: chatbots; ChatGPT; artificial intelligence; linguistic authorship analysis