ChatGPT Does Not Speak Style!

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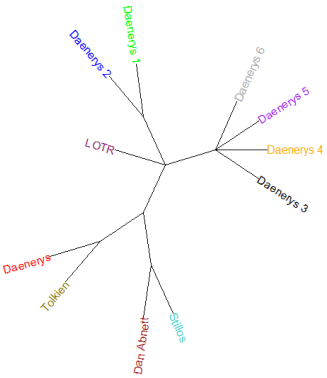
"Human or not"? is the question people are asking quite frequently these days. Especially because chatbots like ChatGPT (Vaswani et al. 2017) are in the process of revolutionizing the writing in any domain. Even though there exist simple means of predicting the authorship of a document for a while already.

From a computational linguistics persepective, authorship attribution methods are an effective way of either assigning unknown texts to a known author from a comparatively small to medium-sized text collection or labeling them as unknown. In general, we distinguish between stylistic features such as distributions of function words (Burrows 2002), sentence length, vocabulary richness and distribution of punctuation marks, and quantitative learning methods, which can recognize an authors' writing patterns. Often, a mix of many different attributes are used as indicators for or against authorship.

In this article, we examine GPT's ability to generate a piece of writing based on an author's name and book title that we prompt to ChatGPT to communicate an author's style. A simple stylometry tool (Stylo, Eder et al. 2013) is subsequently applied to various samples of texts, both to the artificially generated texts and to the originals, to examine whether stylistic differences are recognized. The texts we use come from six chapters of George R. R. Martin's "A Game of Thrones", featuring the character Daenerys Tagaryen. Since ChatGPT, as a large language model, does not really "speak" style per se, instead it attempts to mimic a certain author considering the works. Initial results show that Stylo is able to consistently distinguish generated texts (lower part of the fig.) from original texts (upper part). We further test GPT towards other fictionists such as Tolkien and Dan Abnett with comparable results.



Document Tree 100-3000 MFW, delta 0.6.

References: • Burrows, J. (2002). 'Delta': a measure of stylistic difference and a guide to likely authorship. *Literary and linguistic computing, 17(3)*. 267–287. • Eder, M., M. Kestemont & J. Rybicki (2013). Stylometry with R: a suite of tools. In Proceedings of *Digital Humanities.* 487–488. • Vaswani, A. et al. (2017). "Attention is all you need." *Advances in neural information processing systems* 30.