

Dartmouth College
Department of Psychological & Brain Sciences
HB 6207 Moore Hall
Hanover, NH 03755

October 24, 2025

To the editors of *Computational Linguistics*:

I have enclosed our manuscript entitled *A Stylometric Application of Large Language Models* to be considered for publication as an *Article*. The manuscript introduces predictive comparison, a novel approach to computational stylometry that leverages the predictive capabilities of large language models to capture and quantify authorial style.

Our work builds upon recent developments in natural language modeling and stylometry, but takes a fundamentally different approach from existing classification-based methods. Rather than training a single model to distinguish multiple authors, we train individual GPT-2 models on each author's corpus and use cross-entropy loss as a measure of stylistic similarity. This method achieves perfect classification accuracy across eight classic authors and successfully resolves the well-studied attribution problem of the 15th Oz book. Through systematic ablation studies, we demonstrate that both content words and function words contribute to author-specific signatures, whereas grammatical structure alone proves less distinctive. The approach naturally suggests a notion of stylometric distance and provides a conceptually straightforward framework that extends to open-set attribution problems without retraining existing models.

I expect that this article will be of broad interest to researchers in computational linguistics, digital humanities, and scientists interested in how large language models capture stylistic patterns in text. The convergence of our approach with concurrent work in the field suggests that predictive modeling may represent a unifying framework for computational stylometry.

Thank you for considering this manuscript, and I hope you will find it suitable for publication in *Computational Linguistics*.

Sincerely,

Jeremy R. Manning