

I am writing to submit a manuscript entitled “Mapping Great Britain’s Semantic Footprints through a Large Language Model Analysis of Reddit Comments” for consideration in Computers, Environment and Urban Systems.

In this paper we present an innovative approach to uncover regional variations in the vernacular geographic knowledge people hold across Great Britain from text data. By leveraging a Large Language Model (LLM), we obtain semantic footprints of places encapsulating informal communications among social media users. We then investigate spatial patterns characterising these semantic footprints by mobilising spatial analysis techniques, obtaining local measures of spatial autocorrelations to identify spatial clusters, as well as computing semantic similarity metrics to compare regions and zero-shot text classification to capture regional identities across the UK.

By considering a large corpus of geoparsed comments from the social media website Reddit, we demonstrate that the semantic properties of text exhibit a level of geographic cohesion. For example, we show that footprints are broadly clustered in Scotland, Wales, and London, where spatial autocorrelation is high, while other parts of England are less geographically cohesive over large areas. In our paper we theorise that the broad regional geographic clustering in semantic footprints occurs through the embedded perceived cultural and social connections that form within geographic regions, which can be captured through the vernacular geography of the users that contributed to our corpus of comments.

We believe that our study provides valuable insights into the informal geographic knowledge that people subconsciously hold with respect to geographic locations, and broadens our understanding into the ways individuals and communities engage with geographic place. We feel that our work would be of great interest to the readership of Computers, Environment and Urban Systems, and we would be delighted if you could consider it for publication in the journal.

Thank you for your consideration of our submission.