

Artificial Intelligence and the Spatial Documentation of Languages

Abstract

The advancement in technology has made interdisciplinary research more accessible. Particularly, the breakthrough in Artificial Intelligence (AI) has given huge advantages to researchers working in interdisciplinary and multidisciplinary fields. This study investigates the ability of AI models, particularly GPT-4 and GPT Data Analyst, in creating language maps for language documentation. The study Integrates documentary linguistics, linguistic geography, and AI by showcasing how AI models facilitate the spatial documentation of languages through the creation of language maps with minimal cartographic expertise. The study is conducted using a CSV file and a GeoJSON file both obtained from HDX and from the researcher's fieldwork. The study data is then applied in real-time conversations with the AI models in order to generate the language distribution maps. The study highlights the two AI models capabilities in generating high-quality static and interactive web maps and streamlining the map-making process, despite facing challenges like inconsistencies and difficulties in adding legends. The findings suggest a promising future for AI in generating language maps and enhancing the work of documentary linguists as they collect their data in the field, pointing towards the need for further development to fully harness AI's potential in this field.

Key words: language documentation, linguistic geography, geo-linguistics, cartography, artificial intelligence, ChatGPT