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## AI ARCHAEOLOGY: USING AI TO WRITE PYTHON FOR GIS

Max Gosch

*Fairmount College of Liberal Arts and Sciences  
Social Sciences and Humanities Poster Presentation*

**Abstract:** The learning curve for Geographic Information Systems (GIS) and programming languages poses a challenge despite internet access. This research asserts that leveraging Large Language Models (LLMs) can empower beginners to conduct intricate GIS analyses by constructing Python code through simple commands. Our goal is to make archaeology more accessible, significantly advancing the field technologically. GIS and LLMs represent the forefront of this discipline, and by providing easy access without extensive training, we open the door to a broader audience. This study systematically tests several variables and compares different LLMs, aiming to provide a comprehensive perspective on the role of AI in advancing archaeology. Preliminary findings show that using LLMs to generate Python significantly cuts down on the time needed to conduct various geospatial analyses, as we begin to create outlines that will narrow the time for any beginners interested in utilizing these tools to expedite their work. Moving forward, vigorous experimentation will continue to be conducted for proofs of the research as we continue to see the potential of LLMs in not only archaeology, but other fields across academia.

Faculty Mentor: *Matthew Howland*