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A Demonstration of the Philadelphia Congregations Project's Interactive AI Using Records from the First Moravian Church of Philadelphia

Christ Church Preservation Trust (CCPT) spearheaded the effort, “Digitizing the Records of Philadelphia’s Historic Congregations: Providing Documentation for the Political, Social and Cultural Developments in Philadelphia.” CCPT took a leadership role in organizing congregations for a project that would aggregate and digitize “hidden” church records in one unified database now known as the Philadelphia Congregations Project. CCPT’s initiative of creating one unified database would allow researchers to see how people of various faiths worked together in early America to found, debate, and support institutions that stand today. It would both reveal the effectiveness of William Penn’s religious experiment and offer more clues to the relationship between religion and politics in the colonial era than any previously published body of work. Additional project funding allowed us to incorporate records from the First Moravian Church in Philadelphia, permanently housed at the Moravian Archives in Bethlehem, into this database.

With the digitized materials in the project database, we began using a layered combination of AI Large Language Models and other AI tools (ChatGPT, Google Gemini, Microsoft Cognitive Vision) to provide automated transcriptions of 17th-19th century manuscripts and descriptive summaries of narrative content such as vestry minutes. Our goal for incorporating AI into this database is that we will go beyond traditional archival description to provide increased discoverability, understandability, and context for researchers. This includes the automated development of subject index terms, document summarization, and full text that can be queried using AI tools. Automated outputs are validated and edited by volunteers, who have already provided human-created transcriptions of more than 17,000 pages.

With the transcriptions, indexes, and summaries created through AI and validated by volunteers, we propose to test an AI-based chat interface to allow researchers and the public to ask questions of the historical documents. The goal of this work is to tie the ability of AI models to understand vast quantities of narrative text and demographic tables to actual primary sources that can be reviewed by the questioner. AI models tend to hallucinate, inventing “facts” out of nowhere; by connecting the models to primary documents, instructing the models to validate answers with the documents, and by providing links directly to the digitized materials, our goal is to combat these tendencies and encourage researchers to rely on primary sources with understanding assisted by AI, not invented by it.

During the Institute for Moravian History and World Heritage Conference, we will use the digitized records from the First Moravian Church in Philadelphia to demonstrate live the capabilities of the project’s AI program to summarize narrative content in that record set, make connections between these records and other available records and databases, visualize Moravian missionary travel on maps, and group disparate information together based on date ranges, locations traveled, thematic experiences, and other criteria. Audience members will also be able to interact with AI in real time by asking it questions about the record set.