Proposal 3

Title:
Enhancing AI Data Quality Assessment through Conversational Agents

Context

In the era of Artificial Intelligence (AI), the quality of data is paramount for ensuring the effectiveness, fairness, and reliability of AI systems. However, understanding and addressing data quality issues, including bias, is a complex challenge. This project proposes a novel approach to enhance data-centric explainable AI by leveraging conversational agents, specifically Language Model (LLM) based chatbots, to assist AI experts in comprehensively understanding and addressing data quality issues. By integrating conversational agents, such as ChatGPT, BERT, and LLAMA, with data-centric explainable AI techniques, this project aims to empower AI experts with intuitive tools for exploring, understanding, and addressing data quality issues. Additionally, the research will explore the challenges and opportunities associated with explaining dataset qualities using conversational agents for AI experts.

Aim

The goal of this project is to design, develop, and evaluate a prototype system for explaining the quality of datasets using chatbot applications. This thesis will also investigate how Human-Computer Interaction (HCI) principles can be leveraged to support end-users' understanding of the use and outcomes of conversational agents in explaining data quality.

Reference:

Evaluating a Conversational Agent for Open Government Data Quality Assessment. (2023). Retrieved from https://www.researchgate.net/publication/371575679_Evaluating_a_Conversational_Agent_for_Open_Government_Data_Quality_Assessment

Quality Assessment Methods for Textual Conversational Interfaces. (2022). MDPI. https://www.mdpi.com/2078-2489/12/11/437

Evaluation Framework for Conversational Agents with Artificial Intelligence. (2023). PubMed Central. https://pmc.ncbi.nlm.nih.gov/articles/PMC10873847/

Quality Assessment of Conversational Agents. (2017). Retrieved from https://www.diva-portal.org/smash/get/diva2%3A1199249/FULLTEXT02.pdf

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