Enhancing Search Functionality Using a Large Language Model

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Introduction

Geoportal MV is integral to accessing spatial data in Mecklenburg-Vorpommern. This project aims to enhance its search function using a **large language model (LLM)**, to improve user interaction with spatial data through enhanced precision, speed, and relevance of **search results.**

Problem Statement

The current search function struggles with keyword context accuracy, slow data retrieval, and non-intuitive query handling, leading to suboptimal user experiences.

Objective

The objective is to integrate a **LLM** to refine keyword understanding, contextualize queries, and quicken the delivery of **relevant search results.**

Proposed Solution

Identify and select the optimal **LLM** that will be integrated into the existing infrastructure, trained on spatial queries to better understand the **German language**, and utilize advanced **NLP techniques** for effective query interpretation.

Methodology

The approach includes data preprocessing, LLM model training on spatial data, and system testing in a controlled setup before a phased deployment to evaluate performance enhancements.

Expected Outcomes

The enhanced search function is expected to significantly improve search response times, query interpretation accuracy, and overall user satisfaction, facilitating a superior interaction with Geoportal MV.

Conclusion

This project will elevate Geoportal MV by boosting the effectiveness of our search tools