

LLM-assisted Example-based Spatial Search

Developing novel interfaces for example-based spatial search

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Project Objectives:

This paper explores the development of novel search interfaces, involving the use of LLM, for answering example-based search queries. An example-based spatial search query involves the user giving an input example set containing some number of geographical points of interests and a search area. A result set containing some number of examples mimicking the input example is then returned.

Common applications of example-based spatial searches are in, but not limited to, travel and tourism, geolocation services and social networking.

Key Highlights:

- A novel algorithm, PSPM, to answer example-based spatial search queries
- A classic search interface involving traditional text inputs, buttons and sliders
- An experimental natural language search interface to formulate example-based spatial queries powered by a fine-tuned OpenAI GPT-3.5 turbo model
- Optimizing and monitoring application's latency with Prometheus and Grafana

