GeoMapper: Large Language Model Assisted Geotagging and Mapping

Breif Background

The rapid expansion of geospatial data, combined with unstructured text streams from social media, reports, and news, has created new opportunities for intelligent spatial analysis. However, current geotagging and mapping tools still depend heavily on structured data and lack contextual understanding, especially in multilingual and low-resource environments like India. Therefore, there is a need for a system that can understand geospatial language across multiple Indian languages and automatically extract, interpret, and map location-based insights from diverse unstructured data sources

Application Sectors

- Disaster Management and Emergency Response
- Tourism and Smart Mobility
- Urban Planning and Infrastructure Development

TRL 2

Tech/Prod. Summary

GeoMapper is an LLM-powered geotagging and mapping system that fuses linguistic and geospatial data for real-time analysis. It enables personalized travel planning and disaster mapping by integrating text, satellite imagery, and crowdsourced inputs. The system supports multilingual data processing, live visualization, and spatial reasoning for context-aware decision-making.

Tech/ Product Description

GeoMapper is an intelligent geospatial system that fuses linguistic, visual, and spatial data to extract and map insights from multilingual, unstructured information such as social media text, news, satellite imagery, and crowdsourced visuals. Powered by LLM-based spatial reasoning, it can identify locations, infer relationships, and create meaningful maps even from incomplete data. Key applications include personalized travel planning with dynamic itinerary adjustments, and real-time disaster mapping for situational awareness and resource planning.

Impact - SDG:

SDG 11 – Sustainable Cities and Communities
SDG 9 – Industry, Innovation and Infrastructure & SDG 13 – Climate Action

Market Potential

GeoMapper glbal market value: projected as ~USD 12-15 Billion, a combination of Geo-AI (~USD 7-8 Billion), Smart Tourism (~USD 1-2 Billion) and Disaster Intelligence (~USD 4-5 Billion)

Value Proposition

1. The system's India-centric design
2. Regional language support .
3. Noninvasive geolocating