CSE 591: SPATIAL INFORMATICS

Project Title:
Identifying Proximal Hospitals to Residential Areas in Hyderabad City

Project Description:
During a medical emergency in an area, it is important to have a map identifying nearby hospital facilities. Not only is such a map useful for the awareness purpose of residents, but it also helps in planning out logistics, cutting down travel time, location alternate hospital choices etc. This project will be carried out for the city of Hyderabad, and can be easily implemented for any other city.

Methodology:

1. We start off with a regular Google Earth search for a list of hospitals in Hyderabad. This will helps us give point locations as per Google's database, and we can export it as a .kml file.
2. We download a single, or multiple Sentinel-2 images of Hyderabad, and digitize the residential areas based on visual inspection. We save these areas as polygons, and maybe label them with their actual names based on information from Google Earth.
3. We now have a polygon layer containing all the residential areas in Hyderabad, and a point layer containing all the hospitals in the city.
4. We perform a spatial query based on a radial distance from each polygon, to find three nearest hospitals. We visualize the three hospitals appropriately, based on distance.

Expected Output (On QGIS):
A user selects a residential area (a polygon) and three nearest hospitals get highlighted, with some sort of a differentiation based on their proximity from the residential area.

Team Members:
Debvrat Varshney and Gaurav Aswani