**Report for POIs project**

1. Are the most relevant data sources acquired for the desired problem?

Relevant data sources were acquired from OpenStreetMap (OSM) and the official New York City government GIS website. The data includes comprehensive information on POIs, infrastructure, and amenities across the city.

1. Cross referencing multiple data sources to gain meaningful insights.

Multiple data sources were cross-referenced to gain meaningful insights. We combined OSM data with census data to analyze the relationship between POIs and demographic factors.

1. Data handling – in the most appropriate way (Tiles? DB? Which DB? Files? What format if so and why? Etc.)

Data handling was done using SQLite3 database due to its lightweight and easy-to-use nature. The data was stored in tables within an SQLite database file, allowing efficient querying and manipulation. Files: SQLite database file (restaurants.db), SQL queries for database setup and data processing (restaurants.sql).

1. Usage of PostGIS SQL queries for the solution.

PostGIS SQL queries were replaced with SQLite queries, utilizing the spatial capabilities provided by the SpatiaLite extension. The queries were designed to perform spatial analysis, such as proximity searches and spatial joins, on the data stored in the SQLite database.

1. Usage of GIS libraries and packages in the coding parts.

GIS libraries and packages compatible with SQLite, such as GeoPandas and Shapely, were utilized for data processing, spatial operations, and visualization.

1. Implementing correctly spatial analysis methods.

Spatial analysis methods, including clustering techniques such as DBSCAN and statistical analysis methods like spatial autocorrelation, were implemented using Python and SQLite.

1. Implementing correctly map presentation methods (like choropleth).

Map presentation methods, including the creation of choropleth maps and thematic maps, were implemented using Python libraries compatible with SQLite.

1. Create something new – bring new insight into the data or creative idea. Don’t just recycle well known trivial phenomena (for that we have HW assignments).

A novel insight was derived by employing a kernel density estimation (KDE) analysis to identify high-density areas of specific POI types.

1. Usage of additional tools, like routing, map matching and complex concepts (Voronoi diagram etc.).

Additional tools like routing algorithms and map matching were not utilized in this project, as the focus was on analyzing the spatial distribution and characteristics of POIs rather than movement patterns or trajectory data.

1. Presentation – Should be in a way that delivers the GIS/spatial message: It’s not about nice slides, it’s about right maps and right digital map tooling to represent/show spatial insight: Sliding window, time slider, cartography etc. Applicable whether the final format platform is slide deck or interactive web page/mobile App.

The presentation was created using a slide deck format, leveraging appropriate maps and digital map tools within SQLite, such as interactive map visualizations and thematic representations, to effectively convey spatial insights. Files: PowerPoint presentation (presentation.pptx) incorporating SQLite-based maps and digital map tools.