

Open Street Map

YiLin Liu

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Websites Visited:

- Open Street Maps Wiki
 - Open Street Wiki
 - Open Street Database Access
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Testing Accounts:

- MapQuest:
 - *Username:* NRC-API-Testing
 - *Email address:* nrc.api.testing@gmail.com
 - *First Name:* NRC
 - *Last Name:* Testing
 - *Company:* NRC
 - *Password:* NRCTesting123
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Quick Comparison Between Google and OSM (Overpass):

- Google Maps API offers multiple services oriented to replicate the features of google maps. The calculations such as routing, height features are unique and is not available directly through OSM database.
- Google is a centralized collection of user features that can be accessed by the user.
- Open Street Map itself is a database full of raw coordinate points which is used to render custom maps. This data of geographical coordinates is unavailable from the google Maps API. Refer to the `sampleDownload.osm` for a sample of data that is available on OSM(open as txt file). **For analyses purposes, use the google maps api.**
- **Note that since OSM is based on contributions from the general public, the data it has is not as up to date as the google maps API.**

- From initial readings on the OSM overpass api reveals that it supports a flexible and powerful query language which gives much more control to extract specific collection of points. + EX: to get all roads that start with *k* in the general location of a bounding box and all the points along this road that is a shop.
 - OSM community supports development and has support for many features made available via other 3rd party services.
 - 3D building modelling
 - Routing
 - * Map Features
 - * OSM Route Tags
 - * Open Source Routing Machine
 - Provides an API for routing information.
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API/Data base Access:

- Weekly update of all raw data for the entire planet at Planet.osm
 - Overpass API
 - more optimized for extraction of OSM data. READ ONLY.
 - Overpass Language Guide
 - * Please read for the query structure.
 - Overpass R Package
 - Geocoding Services OSM Package
 - * translating from nodes to lat/lng and meta information and vice versa.
 - For interest Database Schema
 - Data Table Schema
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Data Extraction of OSM DataBase:

GOAL: Explore the basics of what the query language of the Overpass API. Overpass API is focused on reading the existing data. For developers who like to modify the existing data, use the OSM API.

- Did not look further into trying to use the following packages, because there is no direct relevance to data analysis.
- Overpass R Package
 - provides functionality to access the Overpass API directly through R.
 - Overpass Query Tester
- OSM Nominatim R
 - provides geocoding services for lat/lng to data structures by name in OSM and vice versa.
 - nominatim online
 - nominatim api