

Coursera Capstone Project

MAY 9

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Report Content

1. Introduction Section :

- The “business problem” to be solved by this project and who may be interested

2. Data Section:

- Describe Data requirements and Sources needed to solve the problem

1. Introduction

Scenario and Background

I am currently living and working in Singapore, within walking distance to Town Center with great venues and attractions and restaurants, such as international cuisine, entertainment and shopping and kindergarden for my family.

I am current considering a job offer that will obly me to move to New York and I would like to explore if I can find a place to live similar with the one I live now.

Problem to be resolved:

How to find an apartment in Manhattan with the following conditions:

- Apartment with min 2 bedrooms
- Monthly rent not to exceed US\$7000/month
- Located within walking distance (≤ 1.0 mile, 1.6 km) from a subway metro station in Manhattan
- Venues and amenities as in my current residence.

2. Data Section

Data Requirements

- Geodata for current residence in Singapore with venues established using Foursquare.
- List of Manhattan (MH) neighborhoods with clustered venues established via Foursquare (as in Course Lab). https://en.wikipedia.org/wiki/List_of_Manhattan_neighborhoods#Midtown_neighborhoods -List of subway metro stations in Manhattan with addresses and geo data (lat,long): https://en.wikipedia.org/wiki/List_of_New_York_City_Subway_stations_in_Manhattan , (<https://www.google.com/maps/search/manhattan+subway+metro+stations/@40.7837297,-74.1033043,11z/data=!3m1!4b1>)
- List of apartments for rent in Manhattan area with information on neighborhood location, address, number of beds, area size, monthly rent price and complemented with geo data via Nominatim. <http://www.rentmanhattan.com/index.cfm?page=search&state=results> <https://www.nestpick.com/search?city=new->
- Place to work in Manhattan (Park Avenue and 53rd St) for reference

Data Sources, Data Processing and Tools used

- Singapore data and map is to be created with use of Nominatim , Foursquare and Folium mapping
- Manhattan neighborhoods were obtained from Wikipedia and organized by Neighborhoods with geodata via Nominatim for mapping with Folium.
- List of Subway stations was obtained via Wikipedia, NY Transit web site and Google map
- List of apartments for rent was consolidated from web-scraping real estate sites for MH. The geolocation (lat,long) data was found with algorithm coding and using Nominatim.

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- Folium map was the basis of mapping with various features to consolidate all data in ONE map where one can visualize all details needed to make a selection of apartment