

Opening bank branch

Introduction

Techcombank is one of the largest bank in Vietnam. Their target is becoming largest bank in Vietnam. They are implementing strategies to reach their target. In which, Opening bank branch is very important. More branch they open, people know their brand more. Opening branch also helps customers to transact conveniently. And hence they will become growing and larger.

In this strategy, they want to open new branches in District 7, Ho Chi Minh city. The problem is finding suitable locations to open branches. It is the work that I must do. I must find out the location of places that people often go to in order to spend money like Coffee shops, restaurants, shopping, etc. If they open branches near those places, it will be easy to approach potential customers.

Describe Data

First of all we need to collect Data of all places in District 7, Ho Chi Minh city including their name, location (address, latitude, longitude). In order to asset Data we use FourSquare and apply folium for visualizing a particular neighbor in which that we will observe customer "traffic" and predict an appropriate locations of new branches in District 7.

Methodology

Work flow

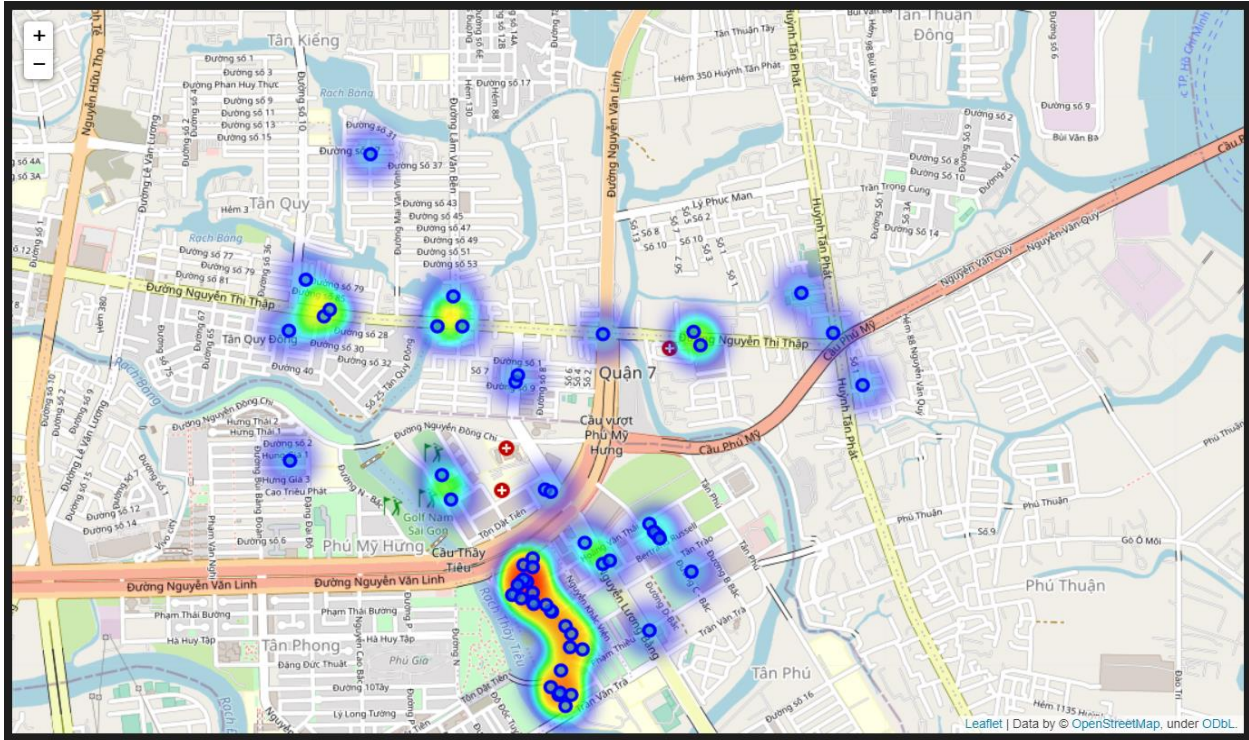
- Get location of District 7, Ho Chi Minh city using Noninatim of geopy.geocoders
- Foursquare API search feature would be enabled to collect the nearby places of District 7
- From in formation of those places, get location of them and visualize on map with Folium
- Find out the appropriate locations base on heatmap

The Python packages are used

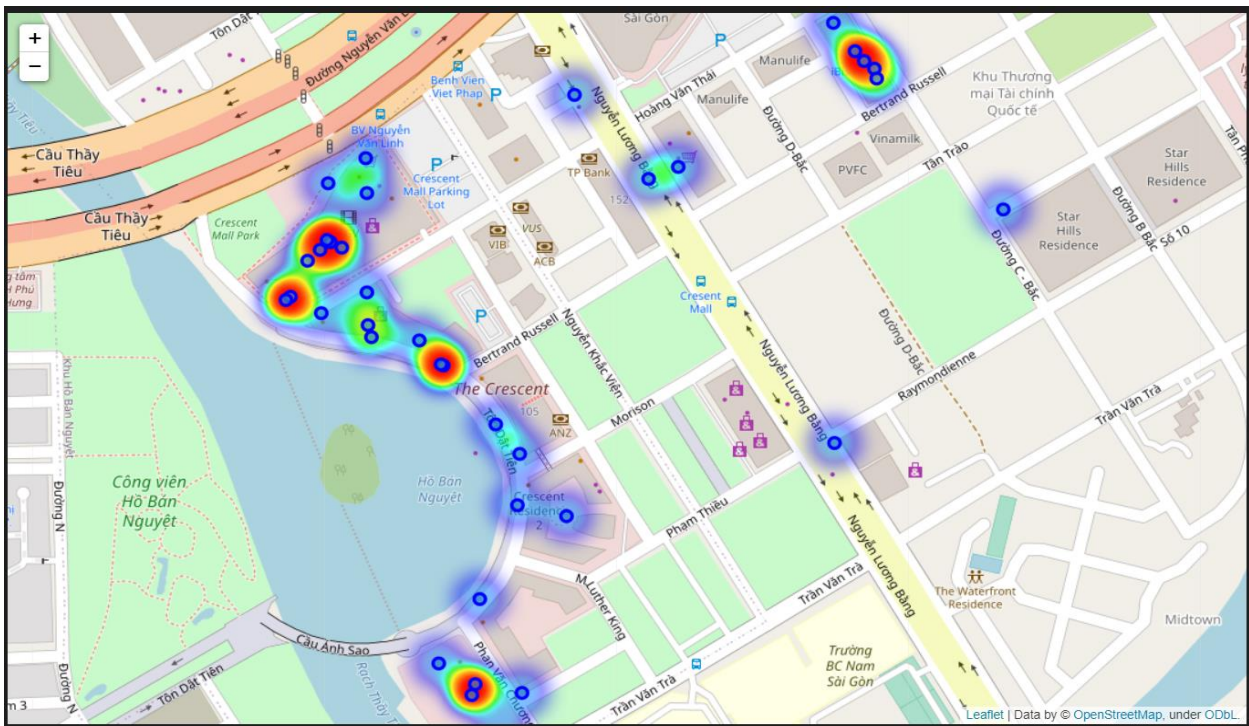
- Pandas: Library for Data Analysis and Manipulation
- NumPy: The fundamental package for scientific computing with Python
- Folium: Map rendering library
- Geopy: To retrieve Location Data
- Requests: an elegant and simple HTTP library for Python
- Matplotlib: a comprehensive library for creating static, animated, and interactive visualizations in Python.

Results

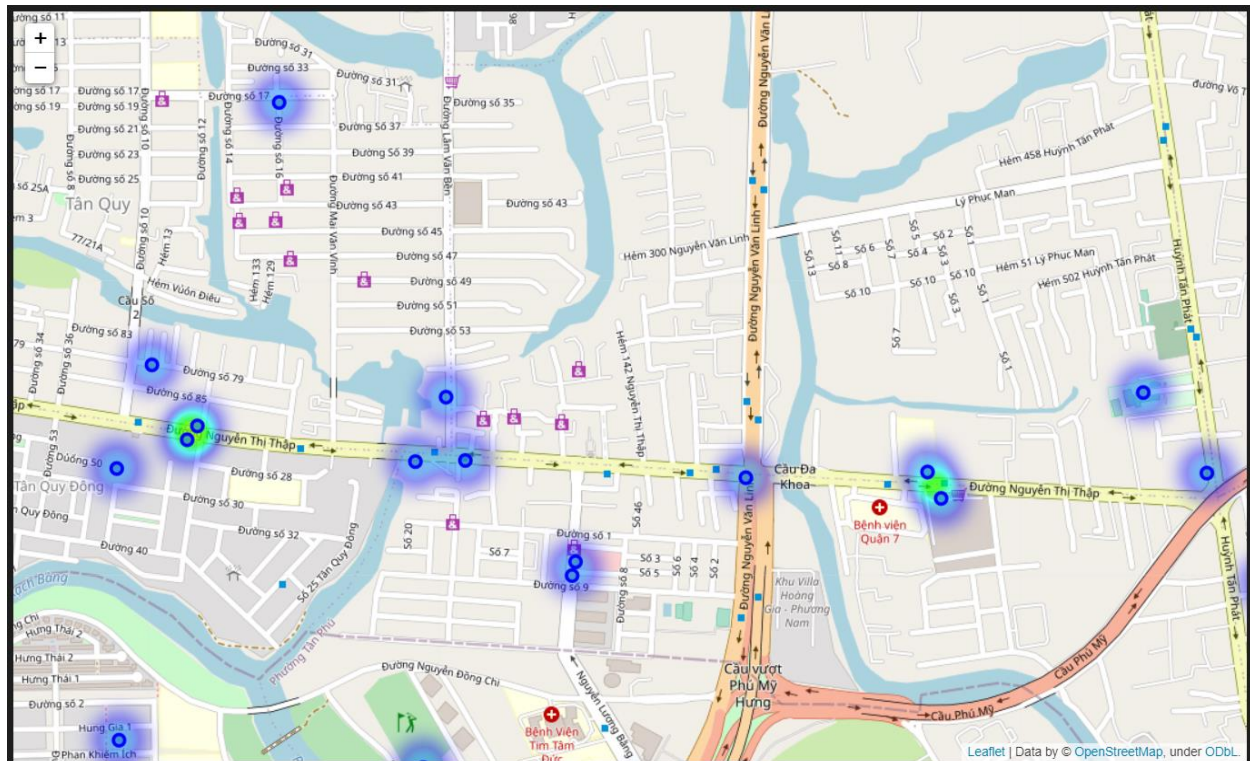
I use Heatmap to show the areas with mass of place clearly. The Heatmap that have red color will have a a lot of places, less place will be shown by yellow color and then green color and the last is blue color



Look at the map below, We can see that there are a lot of places mass on ‘The Crescent’ area. Thereupon, the area between ‘Nguyễn Lương Bằng’ street and ‘Betrand Russell’ street has quite many places



‘Nguyễn Thị Thập’ street also has many places mass on



Discussion

There are only 3 areas that mass many place on. We can open several new branches in those areas. Especially, we must open a new branch inside ‘The Crescent’ area or nearby.

Conclusion

This analysis is performed on limited data because maybe places in our country don’t show on Foursquare. But with the data from Foursquare can show the mass of places relatively accurate. There are areas that mass many places and areas do not. Base on data visualization with Folium, we can find out areas where can open first branches in District 7, Ho Chi Minh city