

Capstone Project: Vietnam Culinary tourism

Introduction:

Every year, many foreign tourists travel to Vietnam. According to the General Statistics Office, the estimated number of international visitors to Vietnam in December 2019 reached more than 1.7 million, for the whole year of 2019 more than 18 million. The total revenue from tourists reached 726 million VND, higher 17.1% than the same period in 2018. This is the evidence that Vietnam attracts lots of foreigner in the world. They come to Vietnam because of not only visit locations but also Vietnamese cuisine.

Imagine that you are managing a travel agency outside Vietnam and have to prepare a plan for a group of tourists. They are considering between Ho Chi Minh city and Ha Noi capital, and they want to prioritize culinary discovery. The problem we aim to solve is to analyze whether Ho Chi Minh city or Ha Noi capital has more places to eat and more convenient for tourists to move between these places.

Data section:

We will use the Foursquare API to get data which include locations of places to eat in two big city in Vietnam: Ha Noi and Ho Chi Minh.

Methodology:

The method that I aim to use is visualize data on map to have an overview. After that I will calculate the mean average coordinates of places to eat per city and mean distance from mean average coordinates to know which city is the best place for the experience of Vietnamese cuisine.

Results:

1. Get data:

I have created a FourSquare develop account so that I easily create an app, get Client ID, Client secret.

- Client ID: E52DEM5TQ10JDFUQP4IG4VZZYIGO1WNN2UX4DCLJTBURTNYG
- Client secret: MEBLWTTDWCJNJUVF53ICL5XGJ3L3GG445JW4NCT4IGRIFXI

I made an API call to get locations of places to eat in 2 big cities in Vietnam: Ho Chi Minh and Ha Noi.

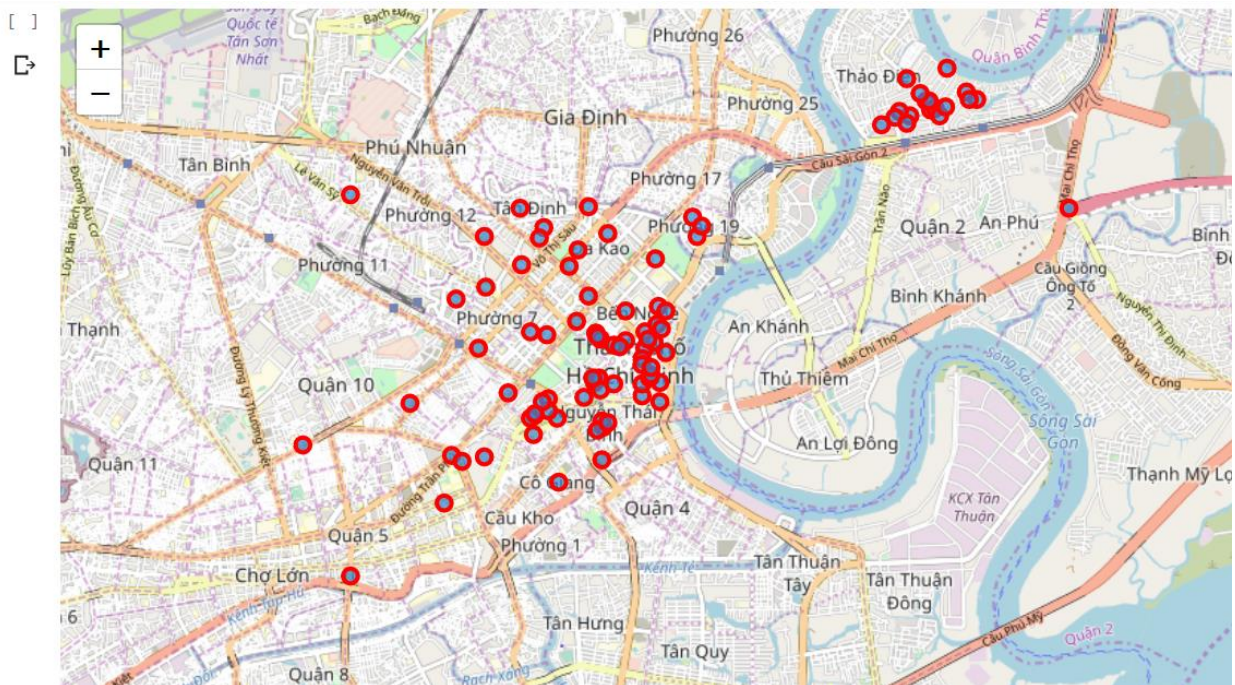
The result show that there are 129 in Ho Chi Minh city and 103 in Ha Noi.

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➡ Total number of places to eat in Hồ Chí Minh = 129  
Total number of places to eat in Hà Nội = 103
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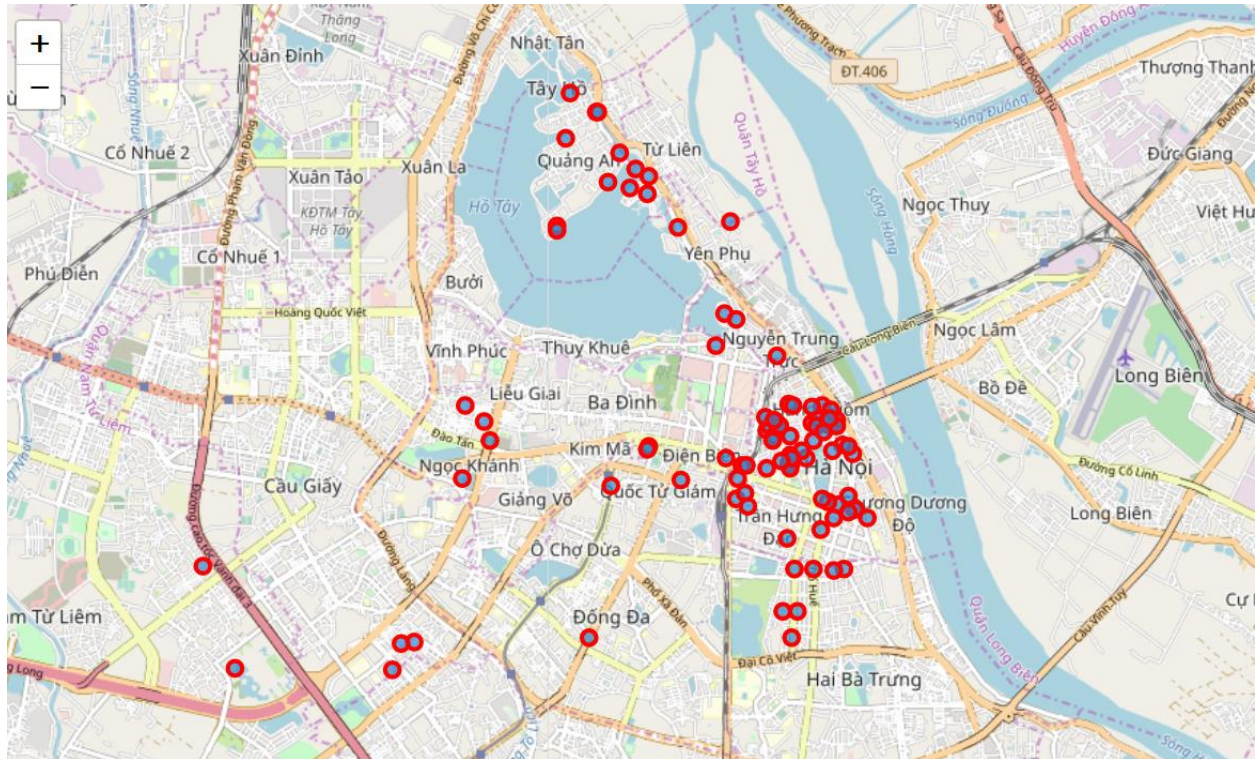
2. Visualize data:

The coordinates of these locations are stored in a JSON file. I will calculate the mean coordinate of all locations and visualize all of coordinates of locations to have an overview:

Ho Chi Minh city:



Ha Noi capital:

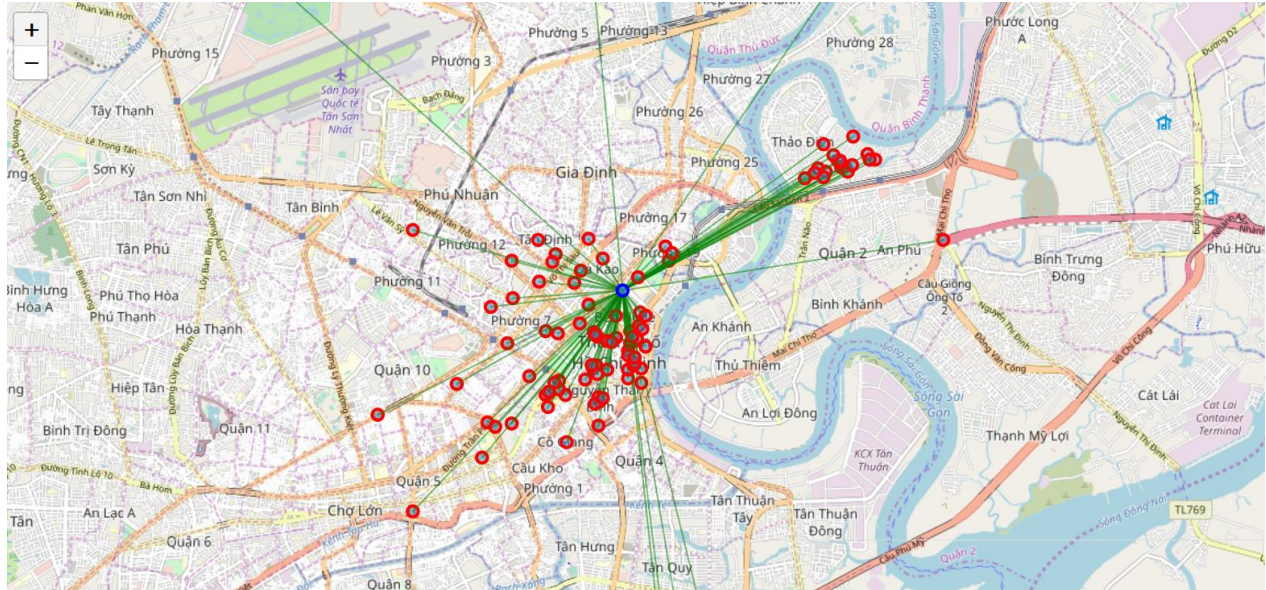


Coordinates of places to eat are visualized on map by red points. After visualizing data, Ha Noi capital showed the scattered distribution of locations, and Ho Chi Minh city may be denser.

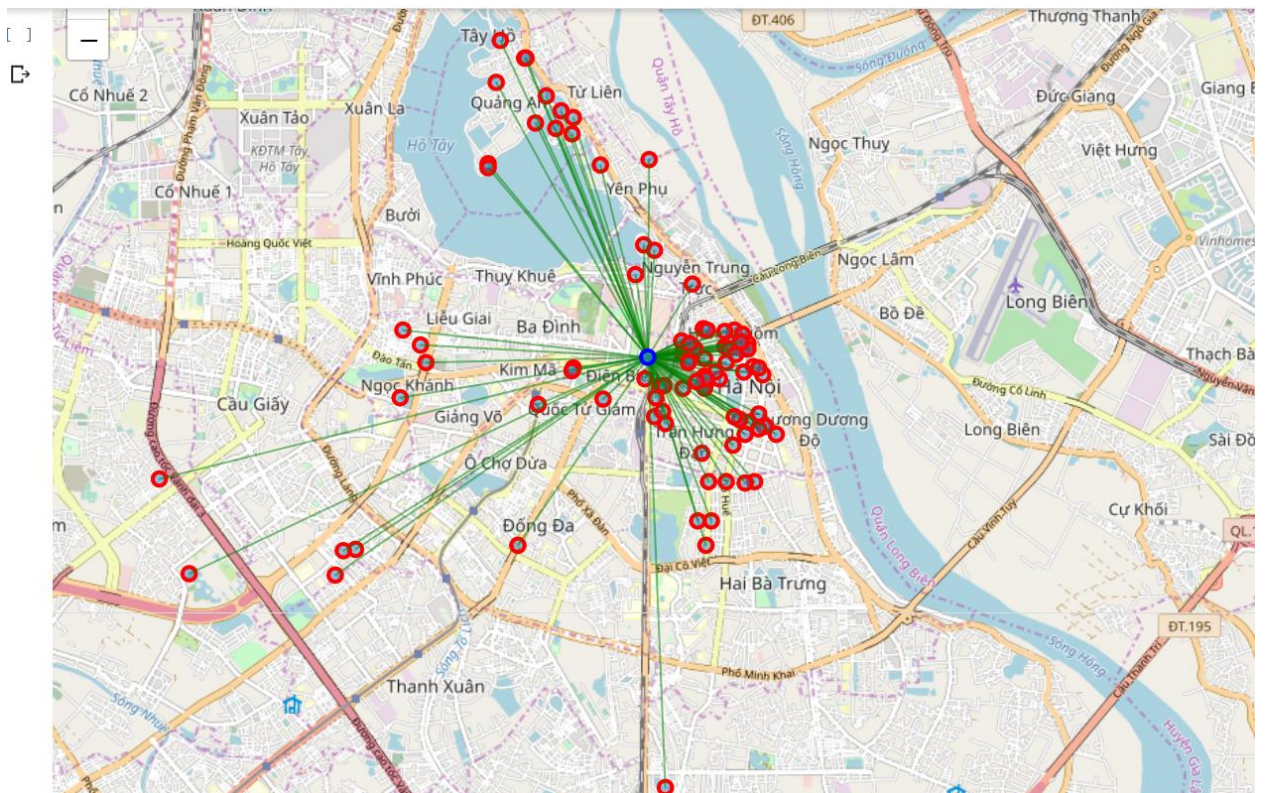
3. Mean distance from mean coordinate:

This is the final step. In the previous section I had a mean coordinate per city, then I will visualize the distance between each location to the mean coordinate and calculate the mean distance from mean coordinate of 2 cites.

Ho Chi Minh city:



Ha Noi capital:



The distance between each location to the mean coordinate is performed by a green line and the big blue point in the center is the mean coordinate.

After calculating the mean distance from mean coordinate, we have the result:

```
☞ HỒ Chí Minh
   Mean Distance from mean coordinates:
   0.027077489133903367
   Hà Nội
   Mean Distance from mean coordinates:
   0.017283118365241025
```

The mean distance from mean coordinate of Ho Chi Minh city is 0.027 and Ha Noi is 0.017.

Discussion:

In my opinion, the result just for reference. Because some of locations aren't pushed and the exact total number of places to eat of 2 cities are more than the number showed in result section.

Conclusion:

Depend on the result we received after calculating the mean distance from mean coordinate, Ho Chi Minh city is the best place for the experience of Vietnamese cuisine which result is 0.027.