

# **Capstone Project - The Battle of Neighborhoods**

## **AN ADVENTURE OF GOURMETS IN ALL COUNTRIES' CAPITAL CITIES**

### **INTRODUCTION**

Where would you recommend a gourmet/foody to visit in order to fulfill her/his hunger for various foods? The world is full of wonders and maybe the most diverse ones are considered as foods. Each country has their own foods and it's mostly different from other country, and many people dedicated themselves to travel around the world and their goal is taste all the foods this world have to offer. This project seeks for food related venues in the capitals of all countries, cluster them and reveals the different cities in terms of food venues. By the nature of this project, travel companies and their customers might be interested in this project to find similar and different places around the world.

### **DATA**

In order to accomplish this goal, latitudes and longitudes of the capital cities of all countries in the world are required. The "simplemap" data offers a simple, accurate and up-to-date database of the world's country and their capital. From this data, I will be using their latitude and longitude values, I need to explore the venues with "food" section around these cities by utilizing Foursquare API. The "simplemap" data contains city name, corresponding latitude, longitude and country name along with many other features for all cities in the world. I only use the features that I mentioned in this data and then filtered the capital cities for each country. After cleaning the data I have 193 countries with 193 capital cities.

Then I used the acquired location data to explore the nearby food venues from the Foursquare API. Using the "explore" option, I look for top 200 art venues in 5 km radius for each city center and I get "Venue", "Venue Latitude", "Venue Longitude" and "Venue Category" columns with 3316 row in total.

### **METHODOLOGY**

After pivoting and groping the data at hand, we then map all the food-type places onto the map using folium, then use the groupby and count to get the number of places within 5 km radius of the city center and sort it descending

### **RESULT**

The resulting map is as follows:

It can be seen that there are many capital cities of many countries that have at least 200 food-type place within the radius of 5 km of the city center..

## **DISCUSSION**

There are a lot of cities that have 200 food-places but the variation between those cities will be more apparent once we increase the limit of the number of FourSquare API return.

## **CONCLUSION**

To sum up, the foodies can go to cities such as Dublin with a lot of restaurant at the center of the city.