# Coffee Shop Project: Austin, Texas

## Capstone Project - The Battle of Neighborhoods (Week 2)

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# Introduction:

Location is one of the most important aspects when establishing a coffee shop business or any type of merchandise business. The sales and revenue of these types of businesses will depend on where the establishment is located. There will be a difference between the profits between a business in the hub of a city and another one in the suburbs or outskirts of that same city. Any merchandise business around the world requires a quality location for it to succeed, and some holds true for coffee shops.

# Problem:

The primary purpose of this project is to find the best location for a café in the city of Austin, Texas. Using methods of data analysis, visualization, and Python modules, we will discover the best location to open a brand-new coffee shop in Austin, Texas.

# Target Audience:

The target audience for this project are people, who are thinking about starting a coffee shop in Austin, Texas. Technically by altering some parts of the code though, this project could be for a person wanting to open a restaurant in New Delhi, India or another person wishing to open a bakery in Paris, France. With a change of code, this project could be for anyone wishing to open a business in their city. However in this instance, this project will be solely for the people thinking about starting a coffee shop in Austin, Texas.

# Data:

The data required for this project will come from multiple sources:

1. The latitude and longitude coordinates for the city of Austin, Texas will be obtained through "geocoder". These coordinate points are important for marking the various coffee shops on the map of Austin, Texas.

2. All the data associated with the coffee shops in the city of Austin, Texas will be provided by the Foursquare API and the Python modules such, Folium. This data is important to find the coffee shops in Austin, Texas and also to predict the best location for a coffee shop in the same city.

# Methodology (Part 1):

- Loading the Modules (Pandas, Numpy, Folium, etc.)
- Inputting Foursquare Credentials
- Obtaining the Master Data for the coffee shops in the city of Austin, Texas

|   | uid | name | shortname | address | postalcode | lat | lng |
|---|---|---|---|---|---|---|---|
| 0 | 50981188e4b0f94e062c8664 | Houndstooth Coffee | Coffee Shop | | 78701 | 30.266194 | -97.743025 |
| 1 | 4d21da6dd7b0b1f7c980209f | Royal Blue Grocery | Grocery Store | | 78701 | 30.268378 | -97.742678 |
| 2 | 56170c17498ecd6b0a1e7930 | Voodoo Doughnut | Donuts | | 78701 | 30.267602 | -97.740785 |
| 3 | 423a1a00f964a5202f201fe3 | Halcyon Coffee, Bar & Lounge | Coffee Shop | | 78701 | 30.266935 | -97.745717 |
| 4 | 575825ea498e6d816e1142cb | Caffé Medici | Coffee Shop | | 78701 | 30.270119 | -97.742154 |

# Methodology (Part 2):

- Plotting all the coffee shops in the city of Austin, Texas
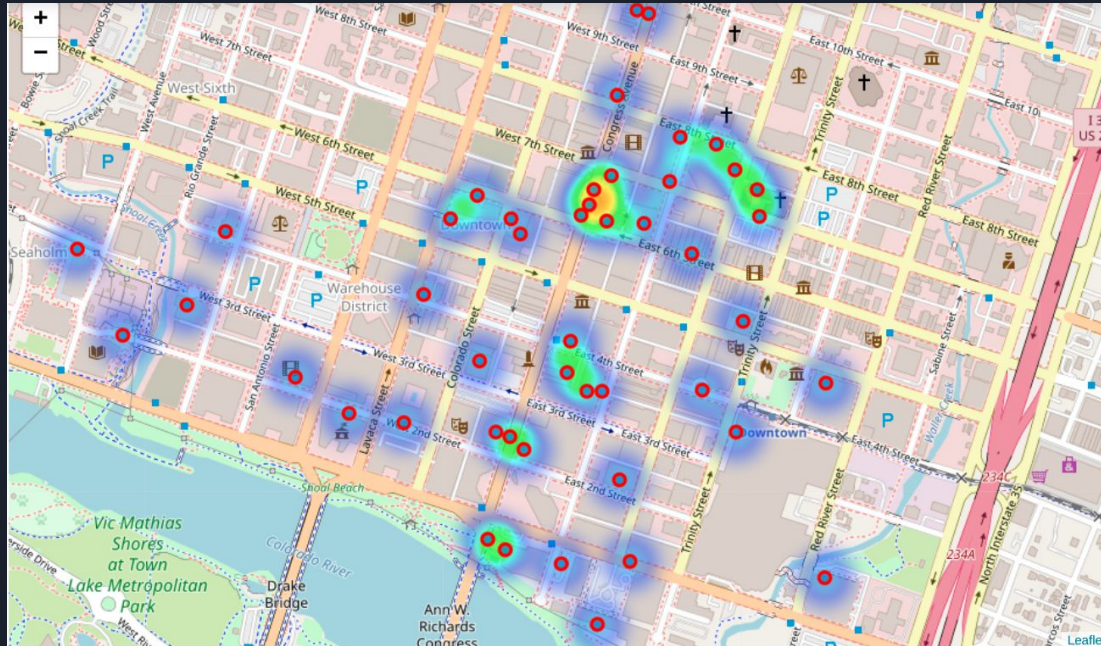
# Result:

The Clustered Map, which shows the best location to start a coffee shop
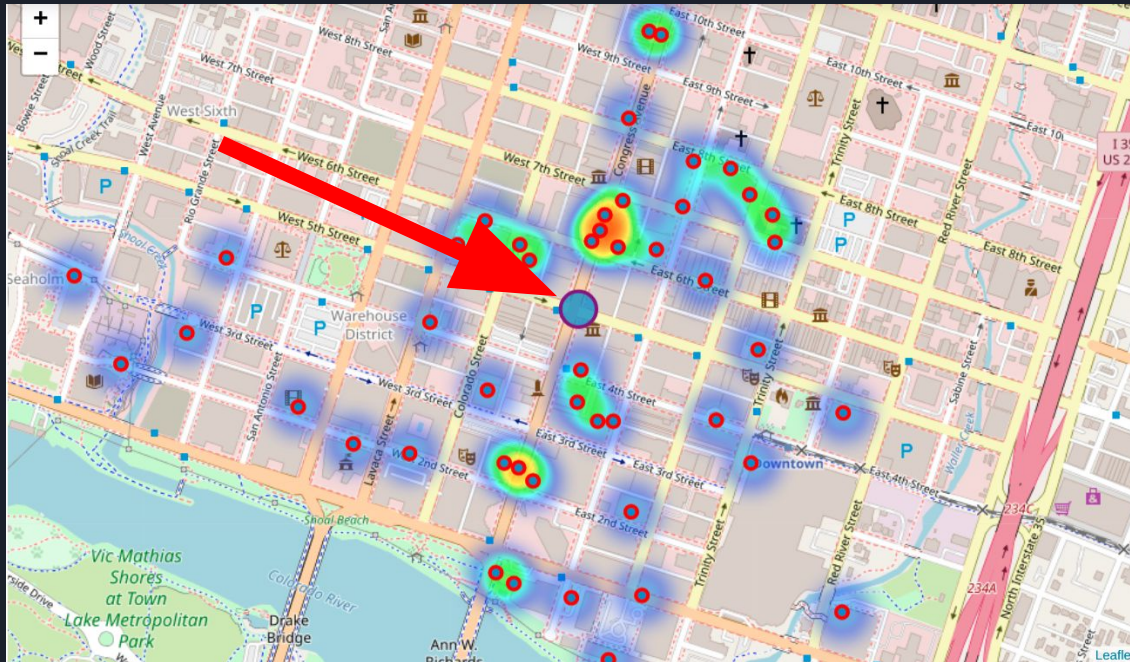
# Conclusion:

Because of this project, we are able to find the optimal location for starting a coffee shop. Because of the many nearby attractions, a close by highway, and also located near downtown Austin, Texas, this spot would indeed be an ideal location for starting a coffee shop.

Thank You!