CHICAGO COFFEE SHOPS

ANALYZING THE COFFEE SHOP INDUSTRY

SCOPE

To analyze the coffee shop industry in downtown Chicago and provide business insights for a major European coffee brand planning to enter the US market.

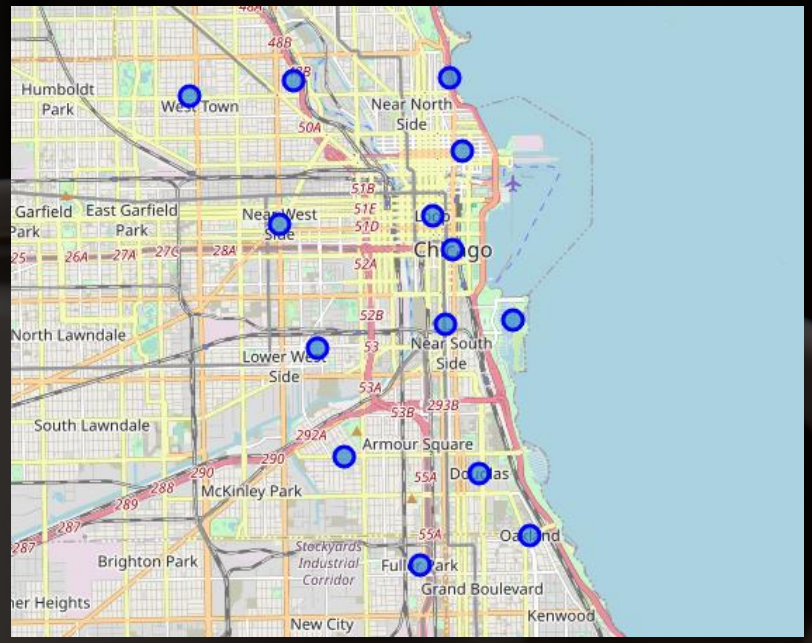
Starbucks business will be analyzed in more details being the industry leader

THE DATA

CHICAGO NEIBOURHOOD FROM GEOPY.GEOCODERS LIBRARY

CHICAGO COFFEE SHOPS DATA EXTRACTED USING FOURSQUARE API

STARBUCKS AND ITS NEIBOURING VENUES DATA USING FOURSQUARE API



	Venue	ID	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue Latitude	Venue Longitude	Venue Category
0	Intelligentsia Coffee	4a5bc165f964a520b9bb1fe3	Loop Chicago, IL	41.881609	-87.629457	41.884517	-87.625783	Coffee Shop
1	Dollop Coffee & Tea	5396301d498e2660782b078a	Loop Chicago, IL	41.881609	-87.629457	41.876925	-87.628864	Coffee Shop
2	Peet's Coffee & Tea	544a7b1e498e333e2f59ecc7	Loop Chicago, IL	41.881609	-87.629457	41.881823	-87.632870	Coffee Shop
3	Peet's Coffee & Tea	54060b96498ed2702c0632f7	Loop Chicago, IL	41.881609	-87.629457	41.882467	-87.624686	Coffee Shop
4	Intelligentsia Coffee	49d51ce3f964a520675c1fe3	Loop Chicago, IL	41.881609	-87.629457	41.878092	-87.629615	Coffee Shop

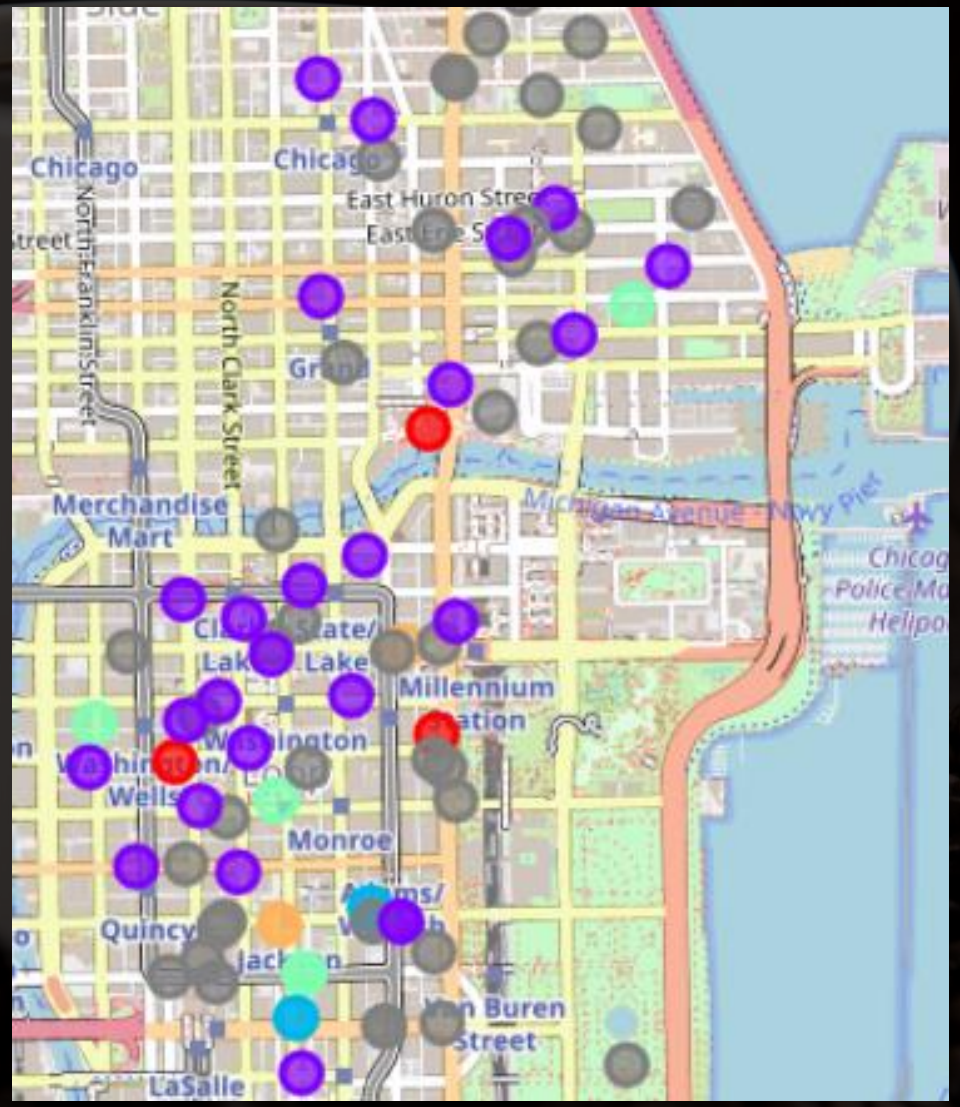
FOURSQUARE /developers

METHODOLOGY – PART I

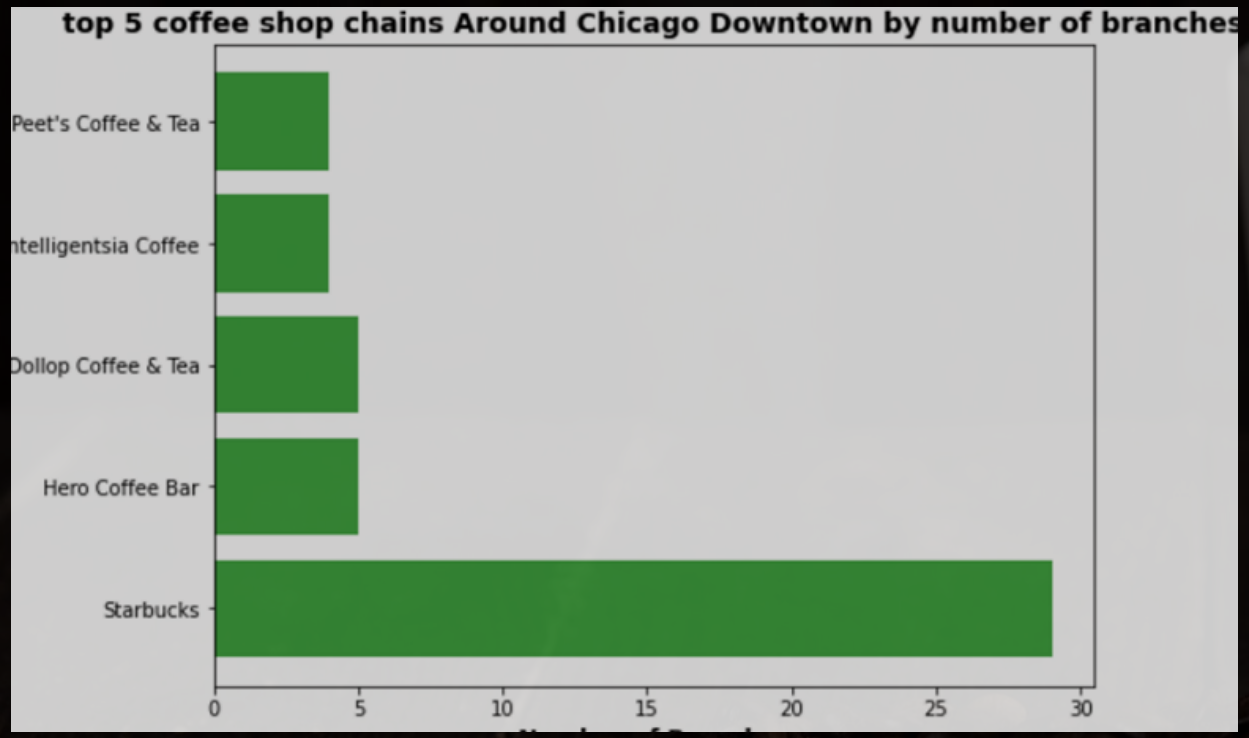
DATA EXTRACTION USING FOURSQUARE API AND CREATING A PANDAS DATAFRAME

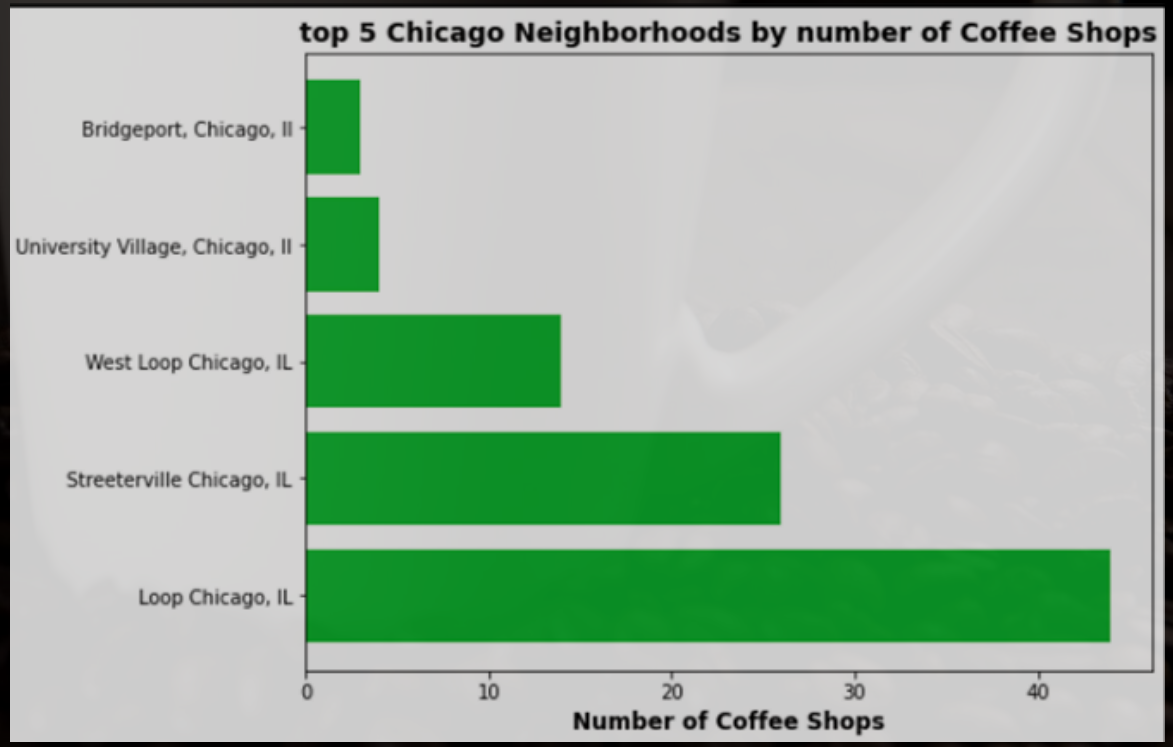
DATA EXPLORATION AND VISUALIZATION USING LIBRARIES LIKE FOLIUM, MATPLOTLIB, PANDAS, NUMPY… TO DETERMINE COFFEE SHOPS BY FOURSQUARE RATINGS AND OTHER INFORMATION

APPLYING K-MEANS MACHINE LEARNING ALGORITHM TO UNDERSTAND STARBUCKS COFFEE SHOPS LOCATION SELECTION



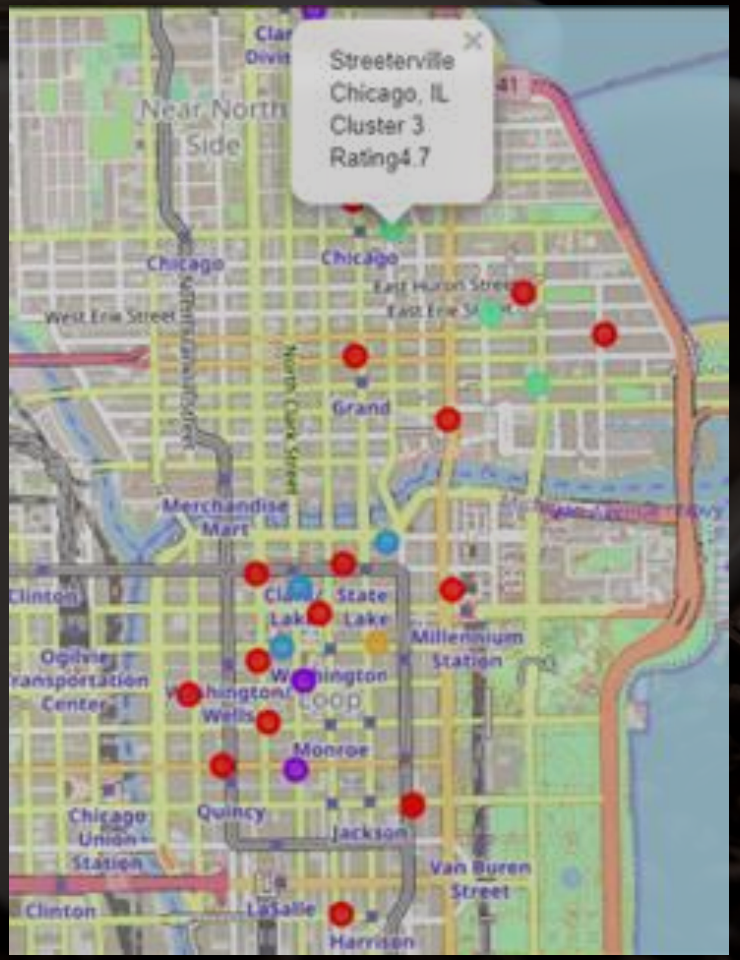
METHODOLOGY – PART II





METHODOLOGY – PART III

Cluster Labels	1st Venue	2nd Venue	3rd Venue
0	Vietnamese Restaurant	American Restaurant	Pet Service
0	Yoga Studio	Pet Service	Sake Bar
1	Coffee Shop	American Restaurant	Sculpture Garden
0	Mexican Restaurant	American Restaurant	Pet Service
0	Pizza Place	American Restaurant	Pet Service



RESULTS SUMMARY

- **105 coffee shops are found on Foursquare in Downtown Chicago and its surroundings.**
- **29 Starbucks branches were found.**
- **Starbucks is not among the 5 top rated coffee shops and its average customer rating is 7.25/10 after ignoring the outlier branches.**
- **Applying K-means clustering model on Starbucks branches considering their top neighboring venues, help us identify the best type of locations to open a coffee shops. It is mainly at the Loop, Chicago.**
- **We also discovered that Starbucks branches located at Streeterville, Chicago had an unusual low rating on Foursquare.**