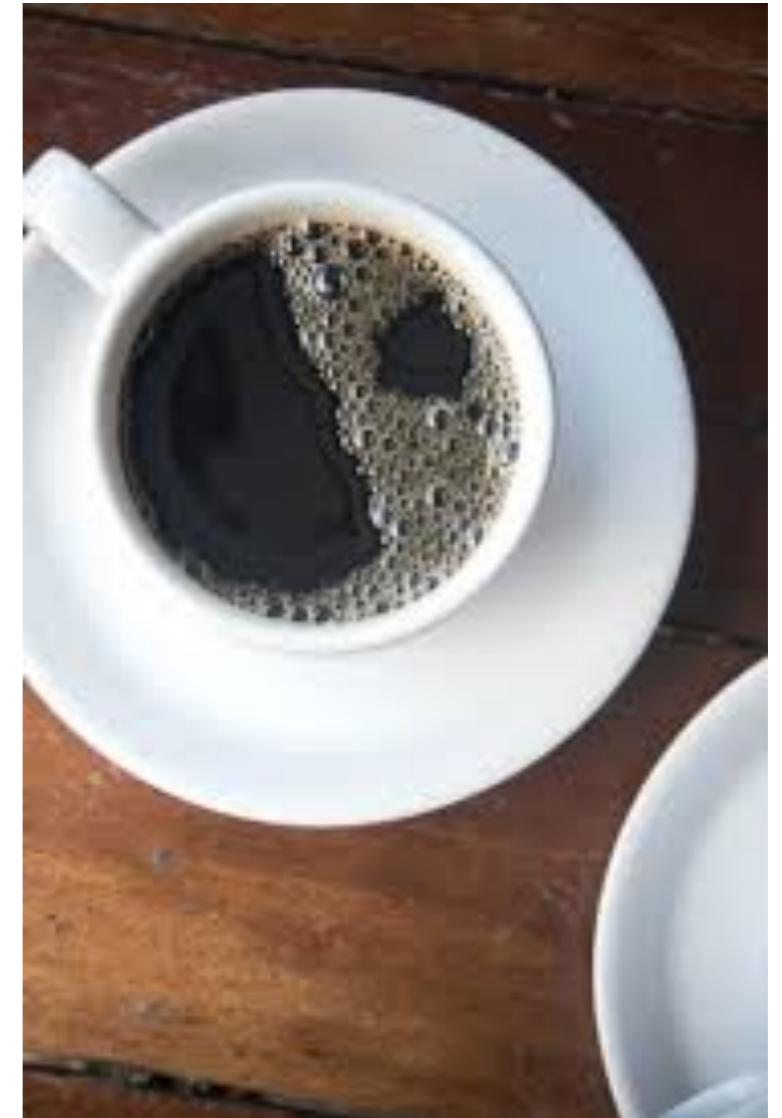


COFFEE CRAWL IN TORONTO

By Morgan Bounds

THE PROBLEM

- Traveling to Toronto for business trip
- Going on an ideal coffee crawl
- As many coffee shops as possible
- 20 minutes per coffee shop
- Limited amount of time: six hours
- Which hotel to select?



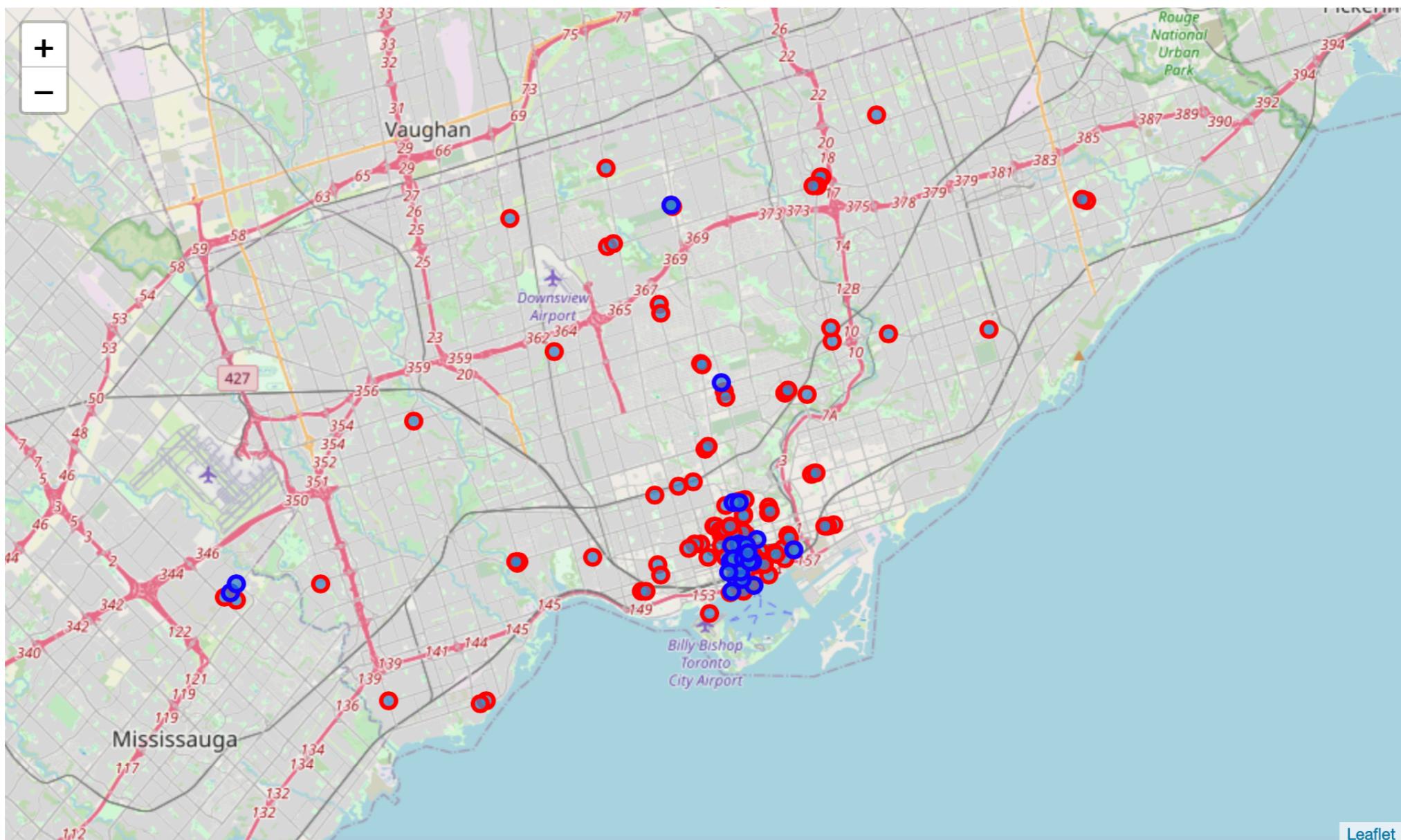
DATA ACQUISITION AND CLEANING

- Postal Code Data from Wikipedia
- Geospatial Data from Coursera
- Venue data from Foursquare API
- Two Dataframes:
 - Hotels
 - Coffee Shops
- Three Features:
 - Venue Name
 - Latitude
 - Longitude



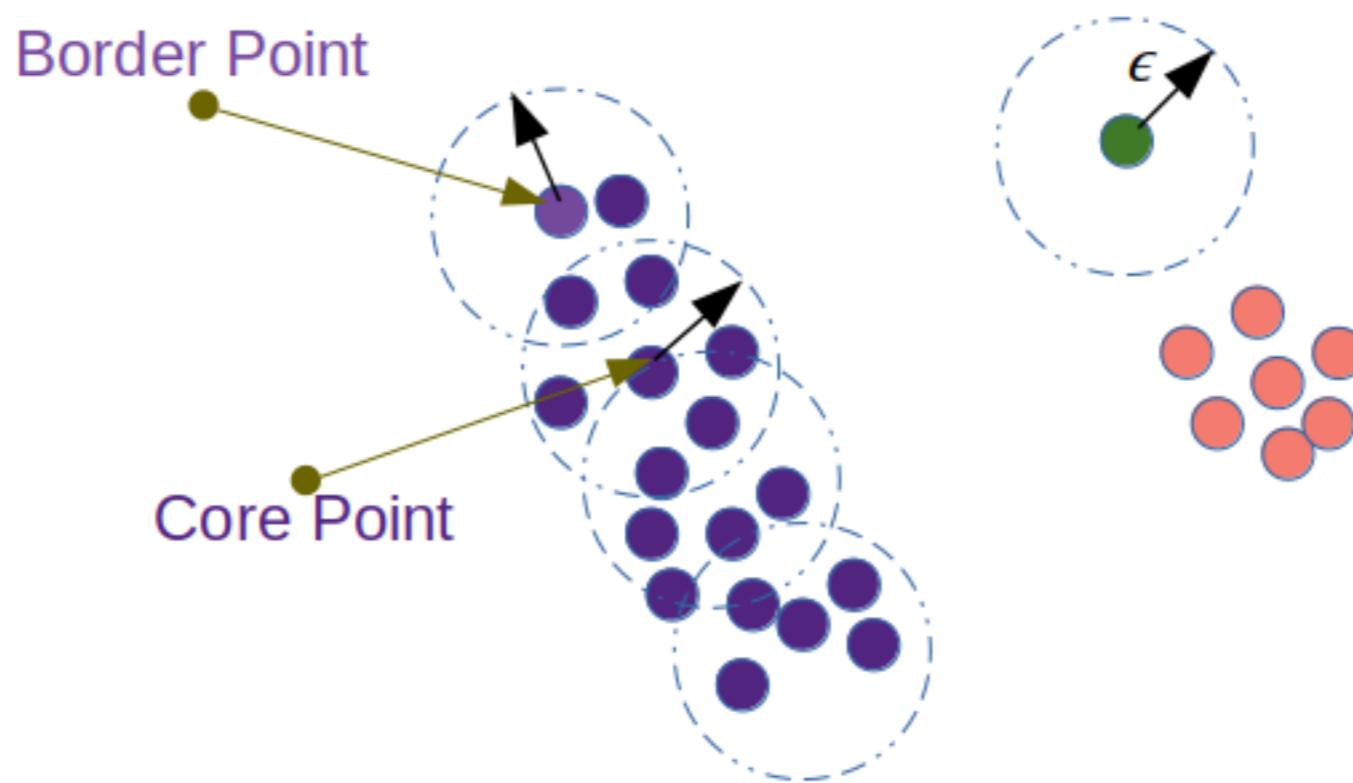
EXPLORATORY ANALYSIS

- 135 Coffee Shops (Red)
- 24 Hotels (Blue)



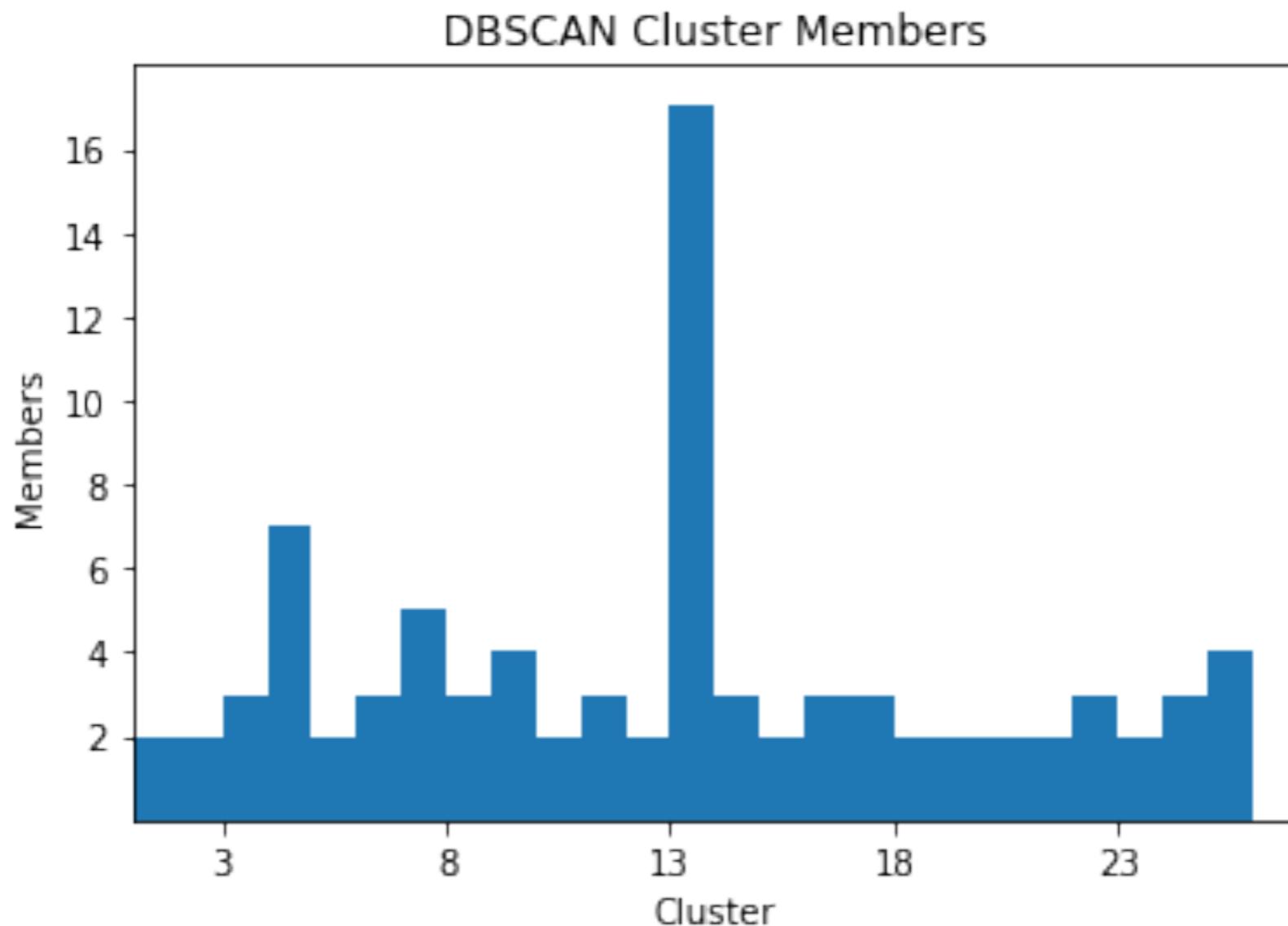
MODEL SELECTION

- DBSCAN Algorithm
- (Density Based Spatial Clusters for Applications with Noise)
- Identifies “densely packed” clusters
- Ensures coffee shops within walking distance of one another



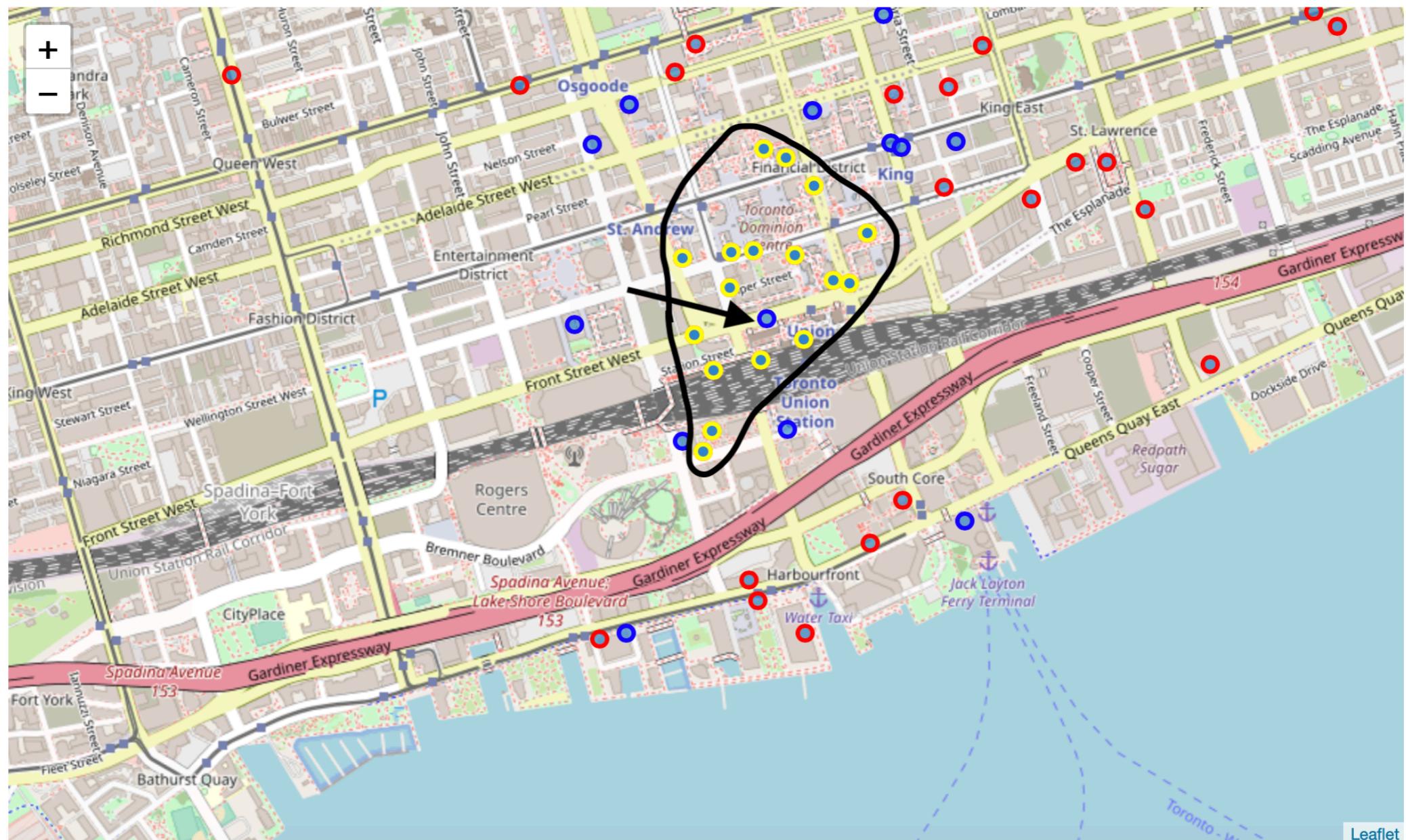
MODEL PERFORMANCE

- 26 clusters identified
- Cluster 13 has most members



MODEL VISUALIZATION

- Coffee Shops in Cluster 13 are **YELLOW**
- Central Hotel is “The Fairmont Royal York”



CONCLUSIONS

- “The Fairmont Royal York” is the best hotel for coffee crawls
- The 17 coffee shops in the cluster would take nearly 6 hours
- The walking between coffee shops is minimized
- Approximately 2 minute walk between shops