IBM DATA SCIENCE CAPSTONE PROJECT

Battle of the Neighborhoods: Toronto Gyms

BUSINESS PROBLEM

- Expected demand for gym memberships in 2021

- Already a large number of gyms in Toronto

- Find neighborhoods with few number of gyms that could be receptive to a new gym opening up

DATA USED

- List of neighborhoods in Toronto
  - https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M
- Geographic coordinates of each Toronto neighborhood
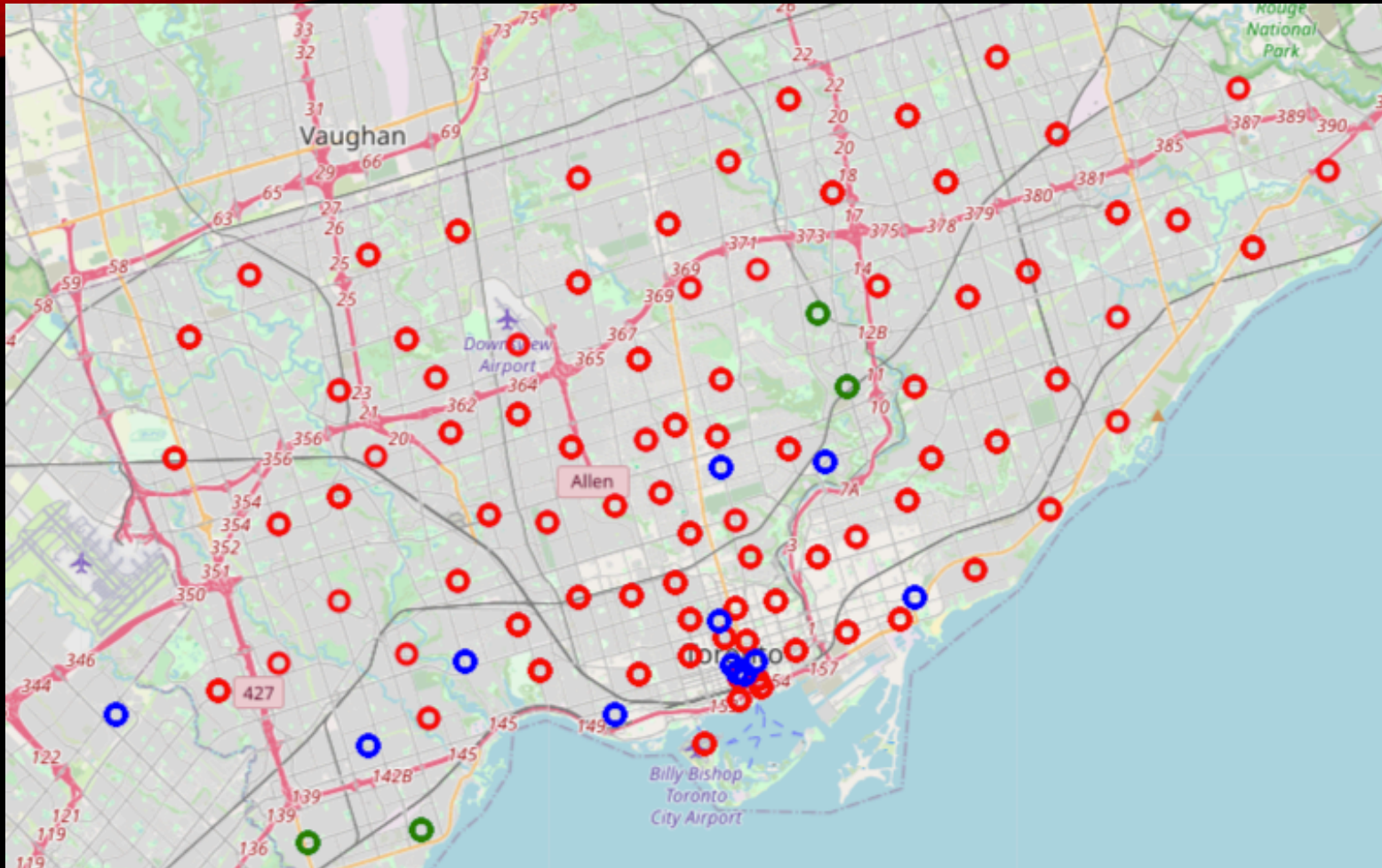- Foursquare API data on current gym locations in Toronto

METHODOLOGY

- Scrape neighborhood data from Wikipedia
- Assign geographic coordinates to each neighborhood
- Mark on Folium map location of each neighborhood
- Use K-Means Clustering to group neighborhood that are similar to find clusters of few occurrences of gyms
- Map clusters

RESULTS

- Green= little to no gyms
- Blue = average amount of gyms
- Red = Many gyms

RECOMMENDATIONS

- Three neighborhood clusters that have little to no gyms:
    - Toronto Dominion Centre, Design Exchange
    - Station A
    - Garden District, Ryerson

- Areas across southern and central Toronto have some gyms but possibly have a demand for more