# Using Clustering to Find Potential Advertising Opportunities

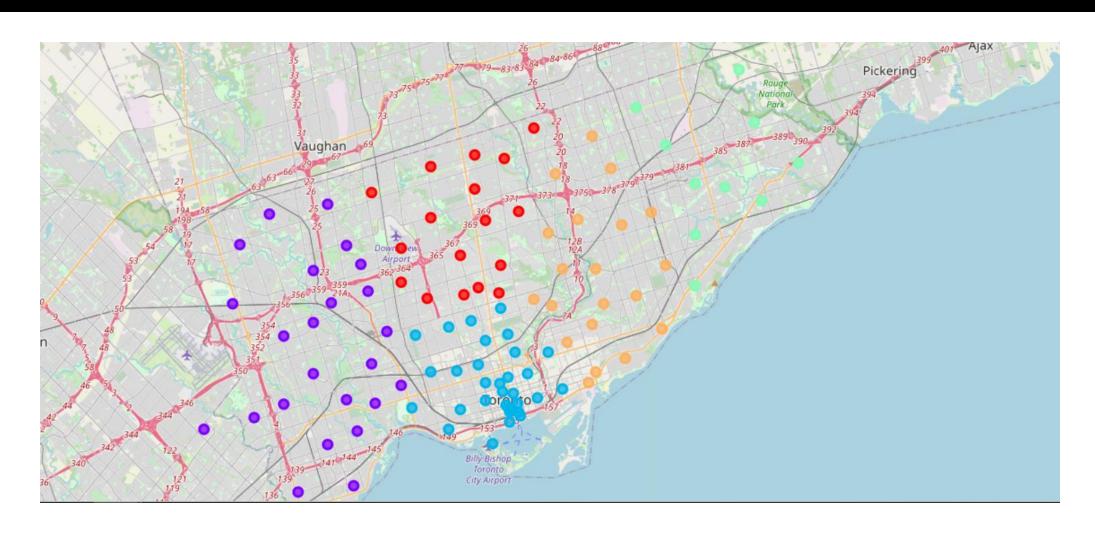
Advertising can be a Significant Source of Income for Specialized Neighborhoods

- Specialization in a certain field can be profitable for neighborhoods who want to attract tourism/businesses.
- Identifying this can be leveraged through advertisements to bring attention to said specialization

### Toronto Data Acquisition and Cleaning

- Data regarding neighborhoods in Toronto was scraped from wikipedia pages.
- This was done through the Beautiful Soup 4
   Python package.
- After acquiring the data, it was converted into a Pandas DataFrame for ease of readability and workability.

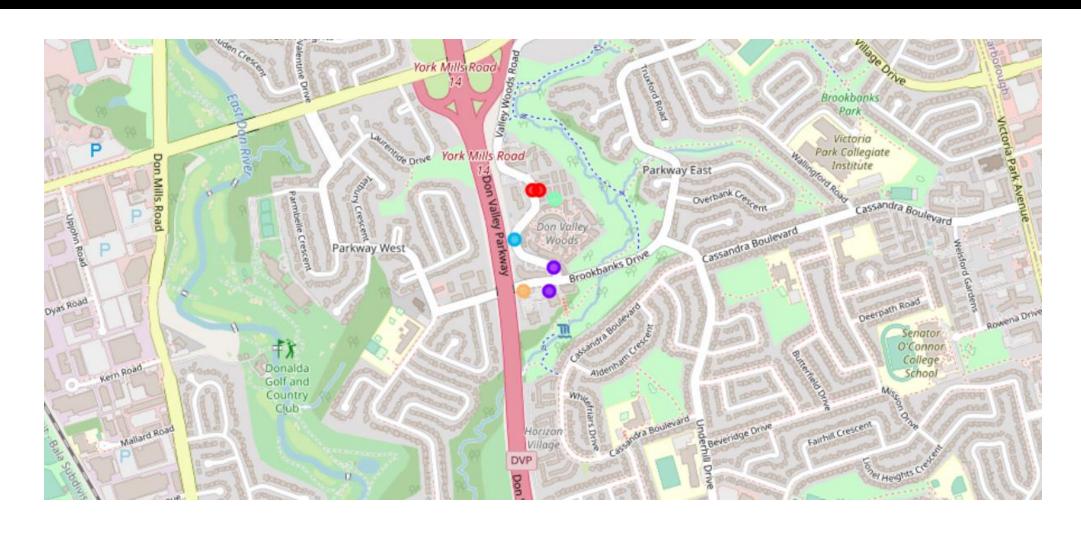
### Visualizing Neighborhood Clustering



## FourSquare API

- FourSquare is a location providing service used by many major companies such as Uber and Snapchat.
- It is used in this project to find popular locations in each neighborhood to determine probable specializations.

### Visualizing Venue Clustering



### Conclusions

- Due to the restrictions of the FourSquare API, there are no meaningful conclusions gained.
- However, with a larger volume of venues, potential insignts would likely be found.
- Additionally, there is no need to limit this experiment to just Toronto, as the code can be applied to any city with on lyminor changes.