



House Buying Search – Hamilton vs. Burlington

Battle of the Neighborhoods

Neighborhood Comparison for Home Buying

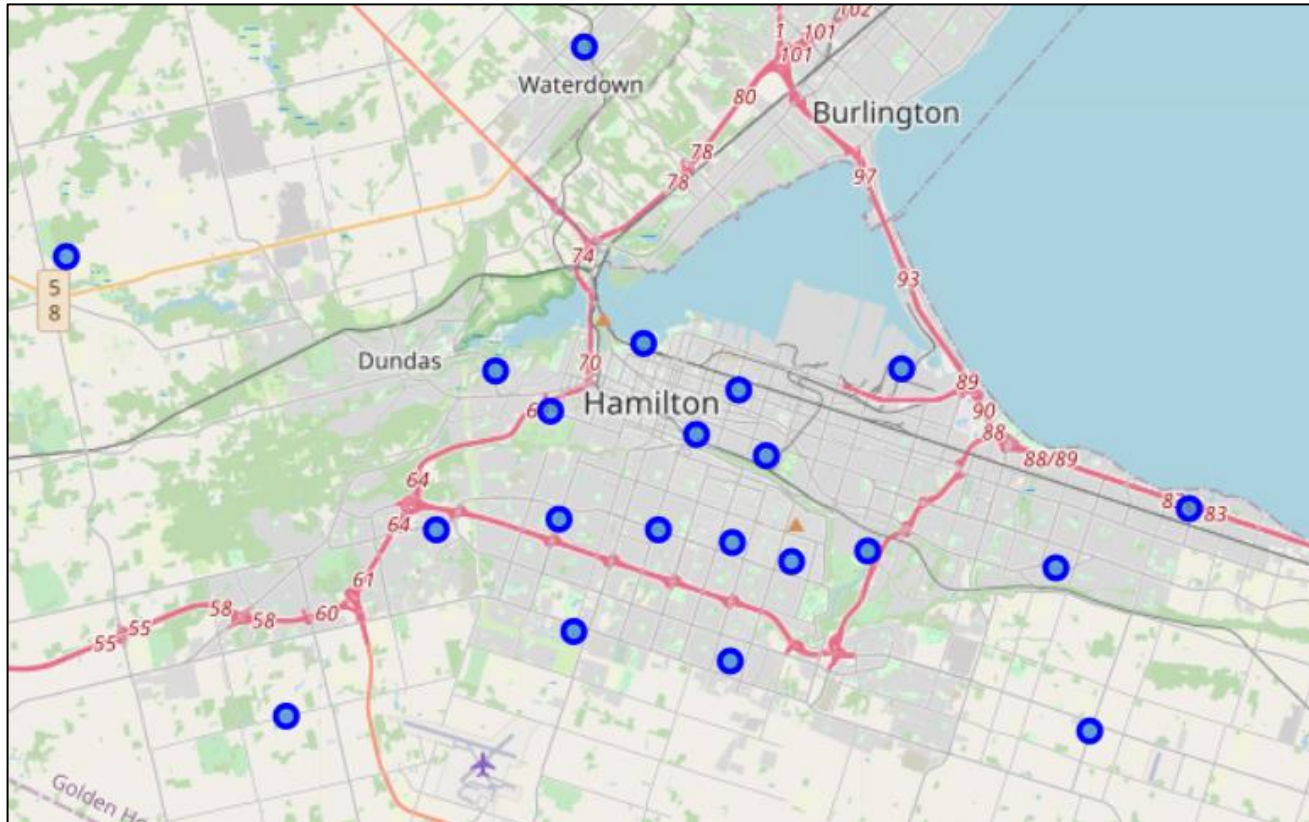
- Before purchasing a house the home buyer typically chooses a neighborhood first
- To find the ideal neighborhood the home buyer must understand what their prioritized criteria are
 - Surrounding amenities
 - Cost/affordability
 - Location
- Each home buyer will have different criteria as one home buyer may not see cost as a factor whereas another home buyer may only be able to purchase the lowest cost house

Data Acquisition and Cleaning

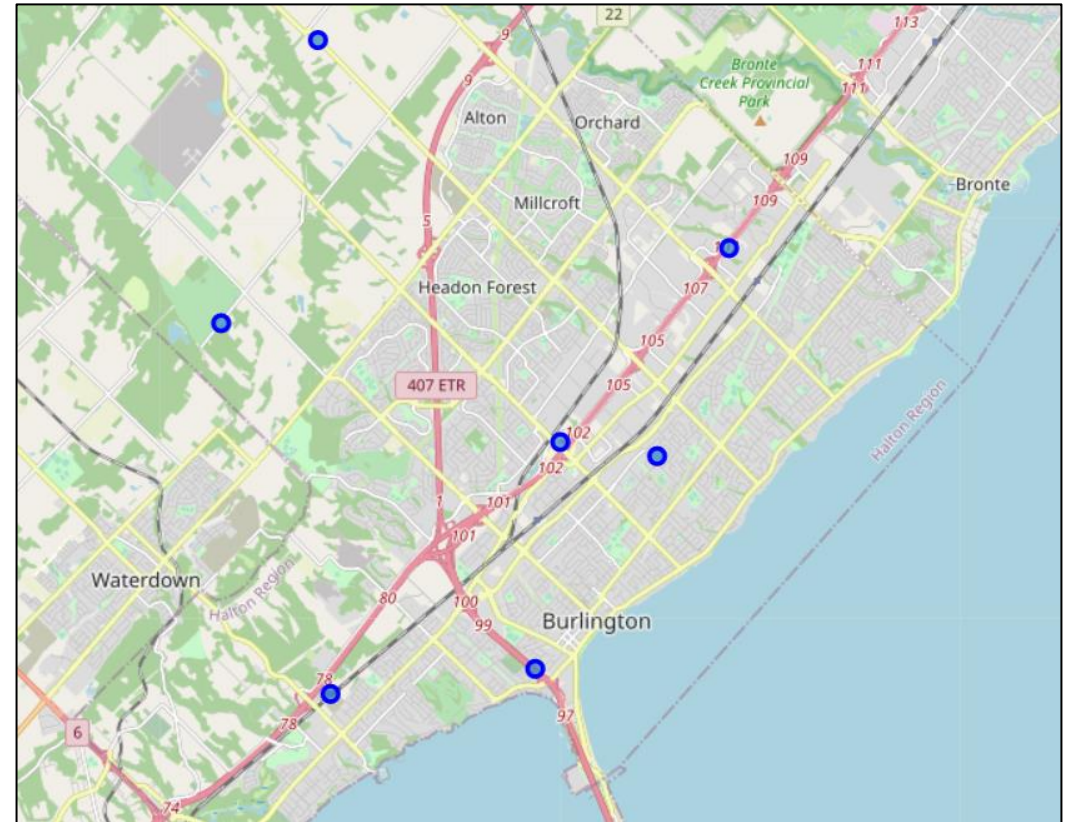
- Cities, neighborhoods, and postal codes data were scraped from the Wikipedia webpage “List of postal codes of Canada: L”
 - <https://en.wikipedia.org>
 - Geographical coordinates were determined using postal codes and geopy python module
- Average list price and active listings for houses on sale were scraped from Zoocasa webpages
 - <https://www.zoocasa.com>
- Top venues surrounding neighborhoods were scraped from the Foursquare API
- Wikipedia dataset was combined with the Zoocasa and Foursquare datasets so geographical coordinates could be utilized
- Neighborhoods without data from Zoocasa source were removed from the datasets
- Cleaned data resulted in 4 datasets – 2 for Hamilton and 2 for Burlington

Neighborhood Locations

Hamilton Map

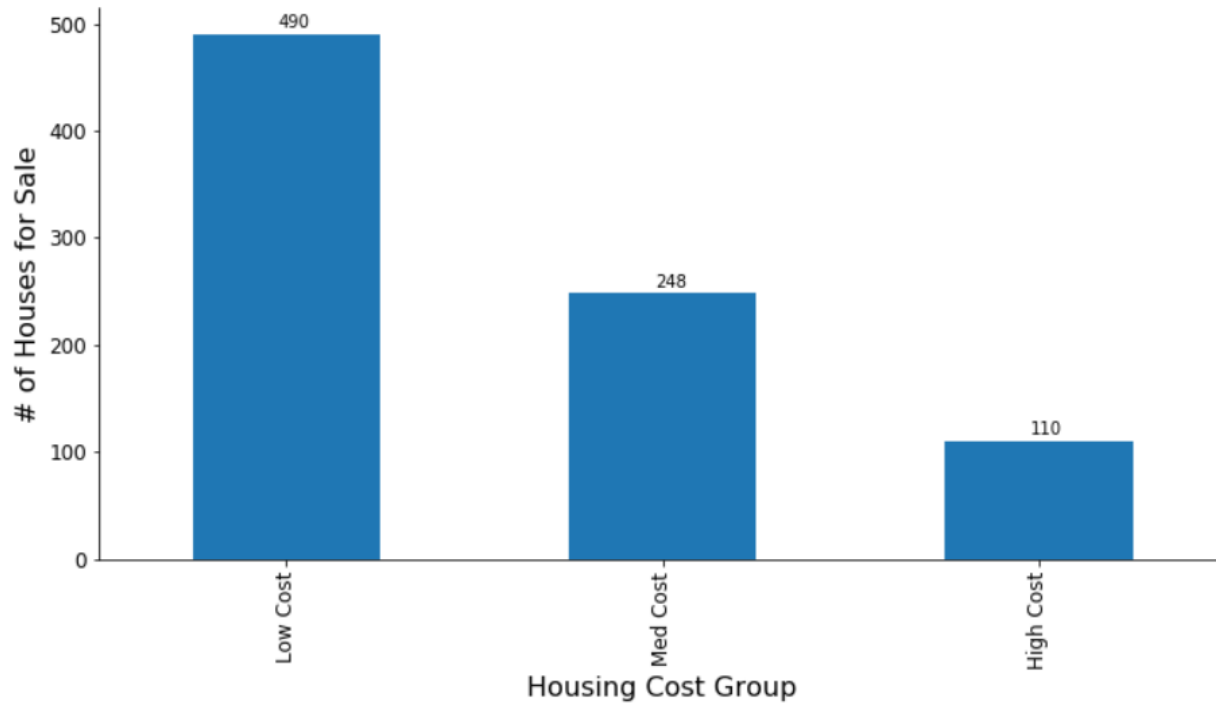


Burlington Map



Average List Prices Grouped – Low/Medium/ High

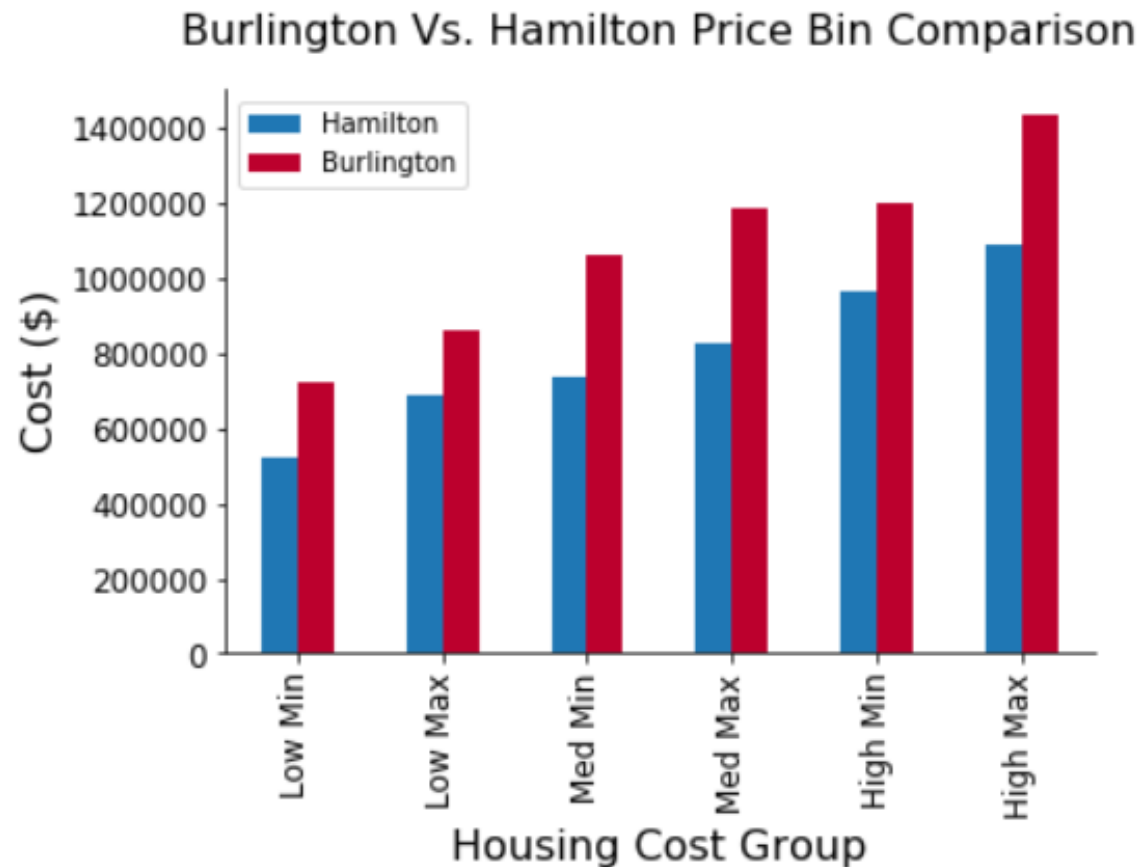
of Houses for Sale Based on Average Housing Price Binning (Hamilton)



of Houses for Sale Based on Average Housing Price Binning (Burlington)

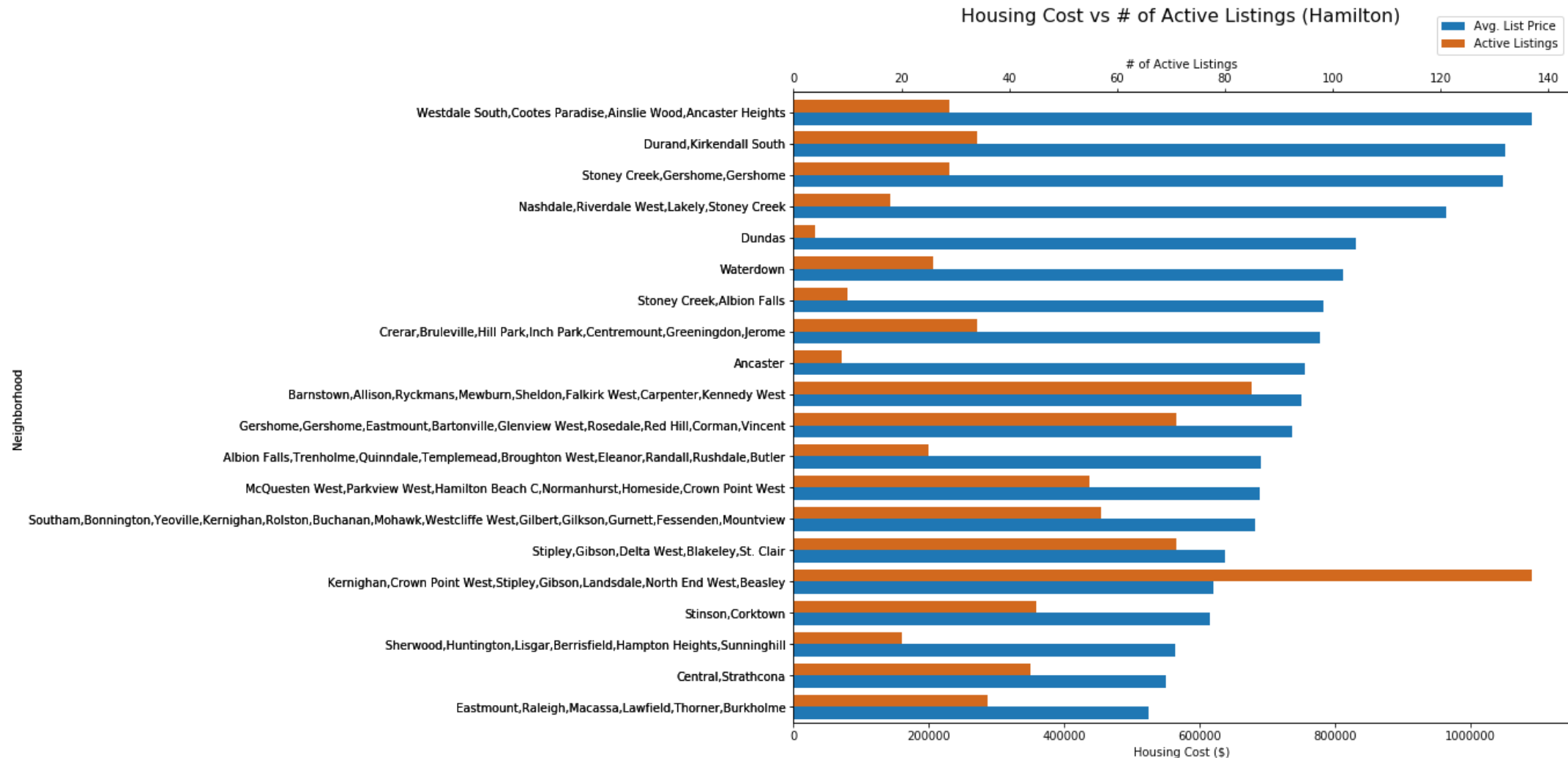


Overlaid Housing Cost Ranges – Hamilton vs Burlington

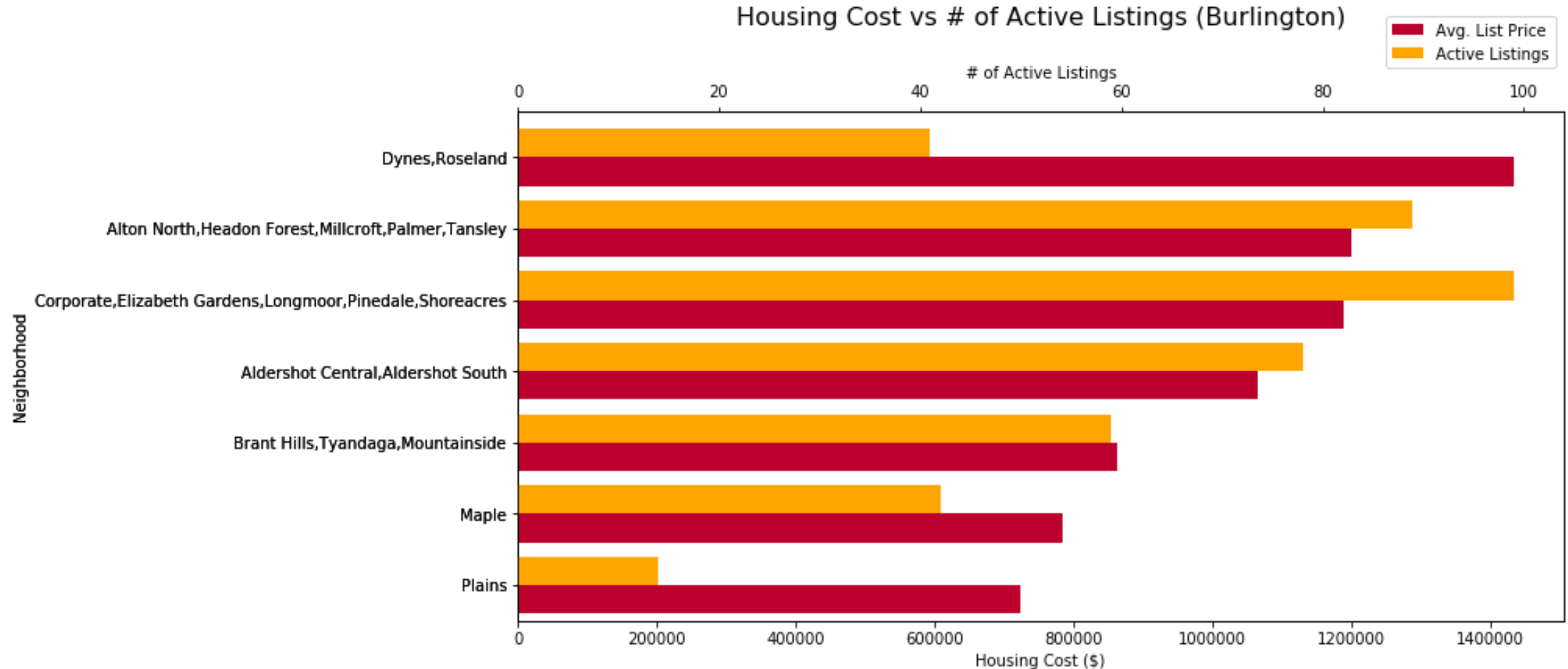


- Min and max of cost groups overlaid between Hamilton and Burlington
 - Burlington housing costs higher across all groups

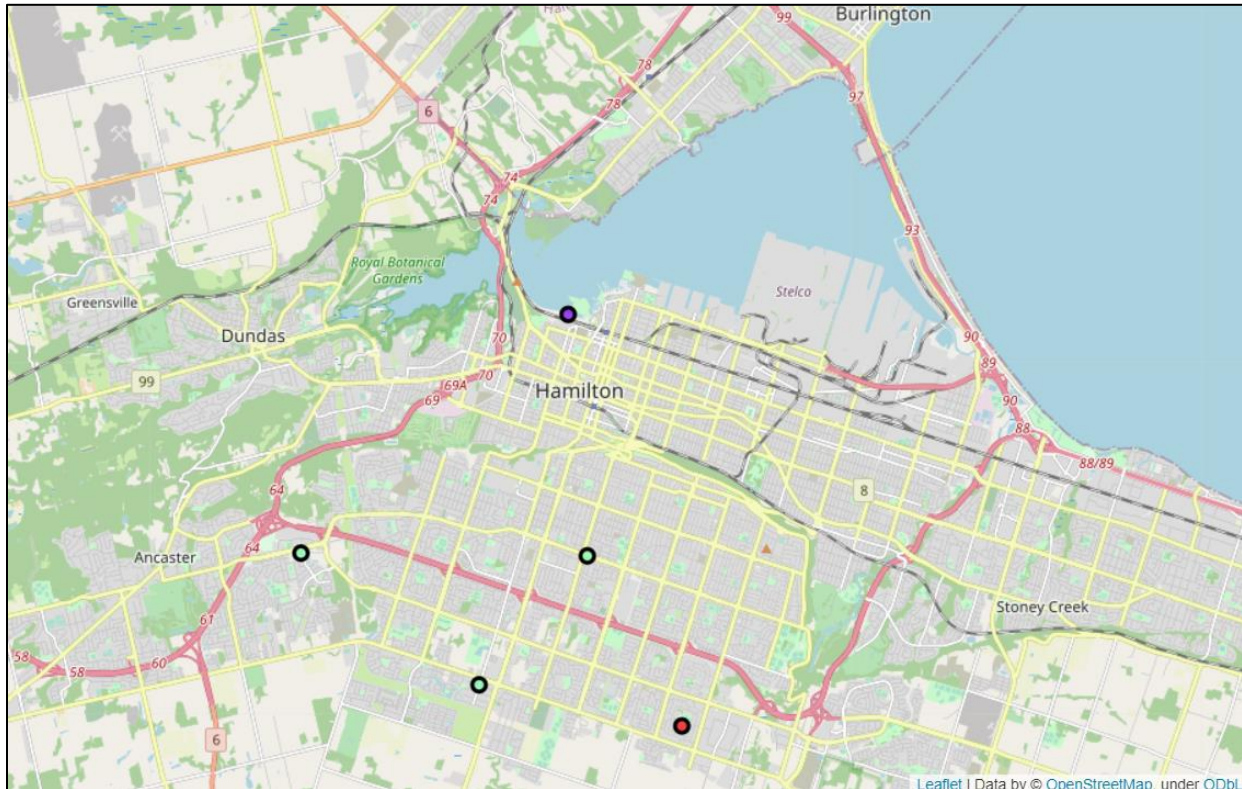
Hamilton Neighborhoods – Number of Active Listings vs Average List Price



Burlington Neighborhoods – Number of Active Listings vs Average List Price



Hamilton Neighborhood Clustering – Top Common Venues within 500m

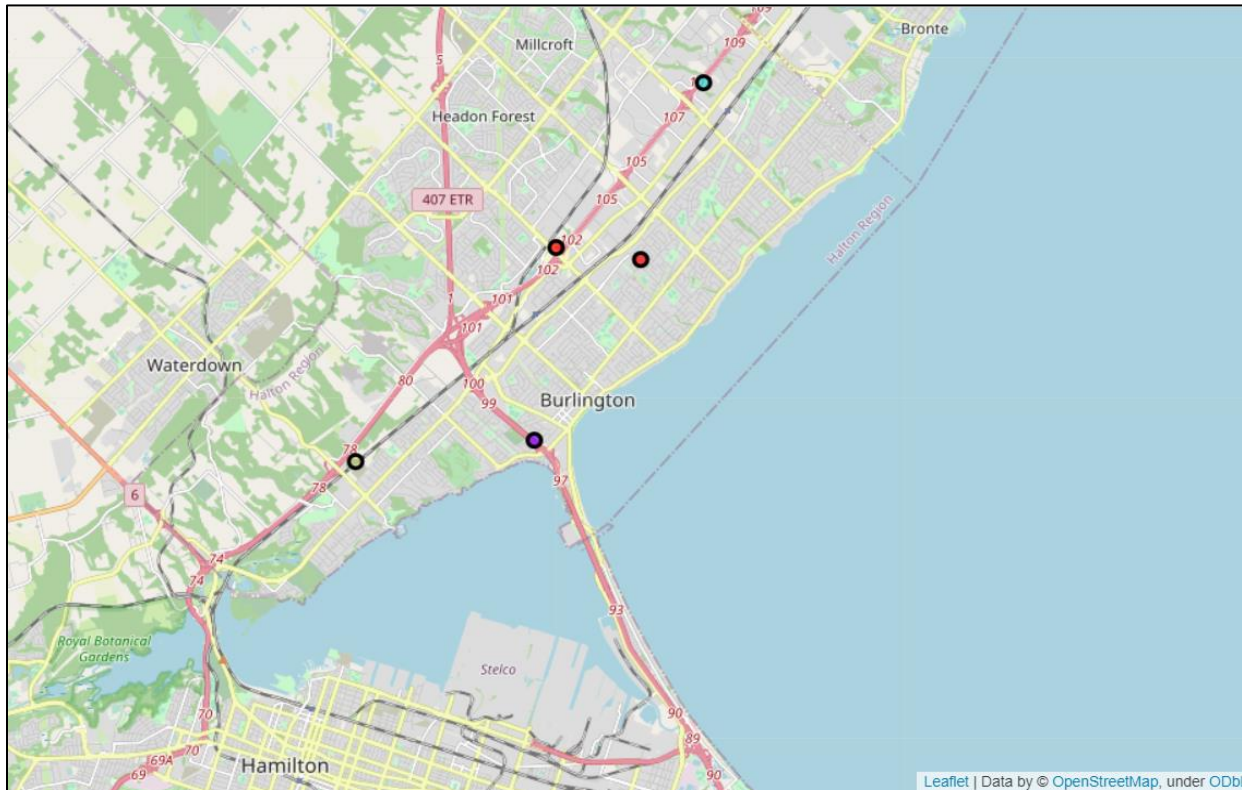


Cluster 0 (Red): Mostly food take out venues.

Cluster 1 (Purple): Only cluster containing a beach and park in its top 10 venues in Hamilton. Other venues mostly food related.

Cluster 2 (Green): Mostly coffee shops and fast food restaurants.

Burlington Neighborhood Clustering – Top Common Venues within 500m



Cluster 0 (Red): Heavy mix of restaurants and stores.

Cluster 1 (Purple): Mix of fitness, restaurants, stores, and is only area with a brewery.

Cluster 2 (Teal): Mostly fitness venues.

Cluster 3 (Beige): Commuter area as the following are within the top 4 venues - train station, platform, and road

Conclusion and Future Directions

- Several visuals created to aid in comparing neighborhoods
- Foursquare data reflects current situation which is abnormal
 - Global pandemic occurring at time of data collection
 - Majority of venues closed during this time impacting Hamilton Foursquare data resulting in missing neighborhoods
 - Foursquare data does not exist for rural neighborhoods
- Crime data would improve this analysis
- This analysis should be re-evaluated once the global pandemic is over and the economy is re-opened