

# Real Estate Prices & Venues Data Analysis of Winnipeg City

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# Problem Statement

Winnipeg is the capital and largest city of the province of Manitoba in Canada. It represents 54.9% of the population of the province of Manitoba, the highest population concentration in one city of any province in Canada.

This boom means a strong interest by buyers and investors in the real estate market. Real estate investors look for locations where house prices are low and facilities (shops, restaurants, parks, etc.) and social spaces are close by. For an individual to find these locations in such a big city, and to gather such information, is a difficult task.

# Problem Statement

Considering these problems, we seek to create a map and an information chart of the real estate index of Winnipeg where each of its districts are clustered according to venue density.

# Data Collection

To solve the problem, we will need the following data:

- List of areas of Winnipeg with its neighborhoods and postcodes from [www.geonames.org](http://www.geonames.org) .
- Properties data such as address, price, postcode from the website [www.point2homes.com](http://www.point2homes.com)
- Foursquare API to explore the boroughs of Winnipeg and segment them.

# Data Preprocessing

Data scraped from [www.geonames.org](http://www.geonames.org) was cleaned and formatted.

	Neighborhood	PostCode
<b>16</b>	Transcona	R2C
<b>20</b>	River East North	R2G
<b>22</b>	St. Boniface NW	R2H
<b>24</b>	St. Boniface NE	R2J
<b>26</b>	River East Central	R2K

# Data Preprocessing

Data scraped from [www.point2homes.com](http://www.point2homes.com) to obtain PostCode and Avg. Price

	AvePrice	PostCode
0	283873	R2H
1	271628	R3M
2	283873	R2H
3	271628	R3L
4	257606	R2M

# Data Preprocessing

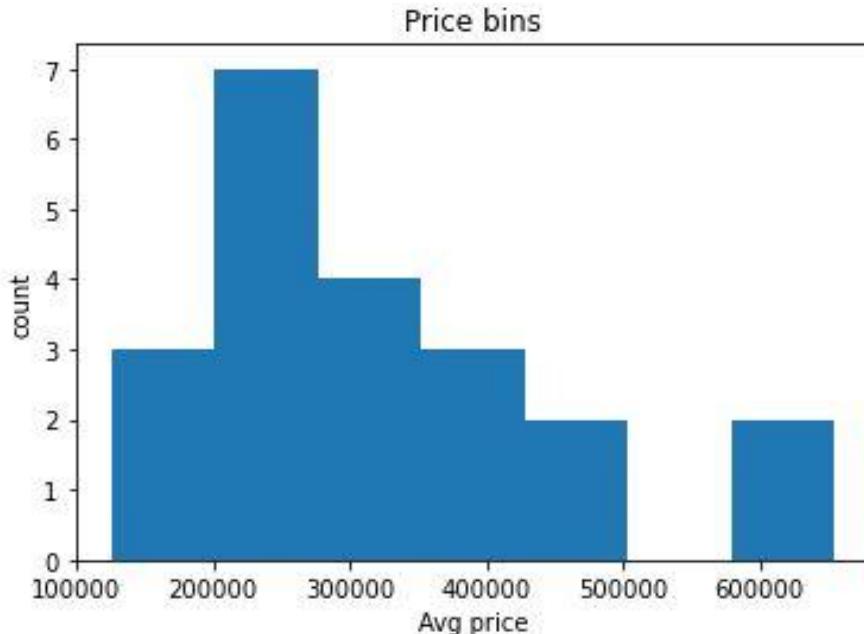
Information merged and using the geocoder library to find the Longitudes and Latitudes of each Location.

	Neighborhood	PostCode	AvePrice	Latitude	Longitude
0	Transcona	R2C	232143	49.88818	-96.99897
1	Transcona	R2C	384000	49.88818	-96.99897
2	Transcona	R2C	379900	49.88818	-96.99897
3	Transcona	R2C	264900	49.88818	-96.99897
4	Transcona	R2C	279900	49.88818	-96.99897

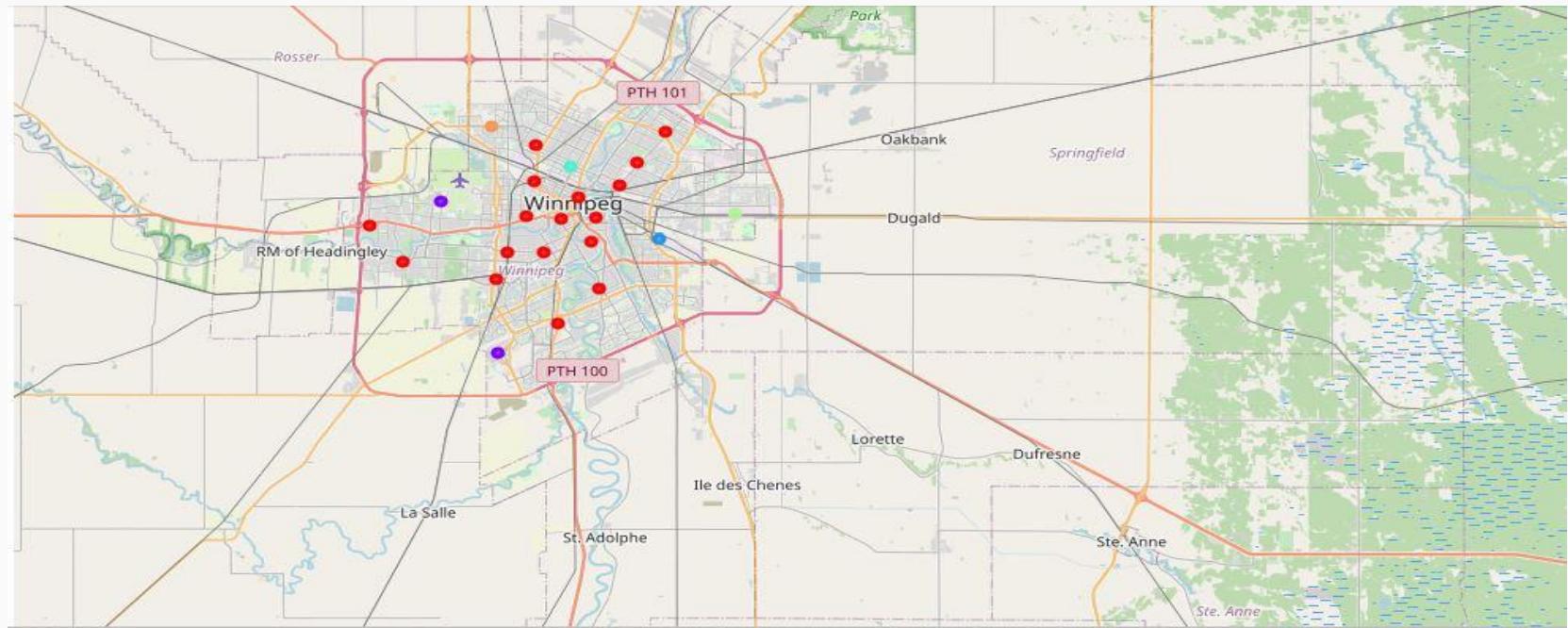
Tables merged with cluster labels for each borough:

- Mixed Social Venues
- Hotels and Social Venues
- Stores and seafood restaurants
- Pubs and Historic places
- Sports and Athletics
- Restaurants and Bars

**House prices of each location:**

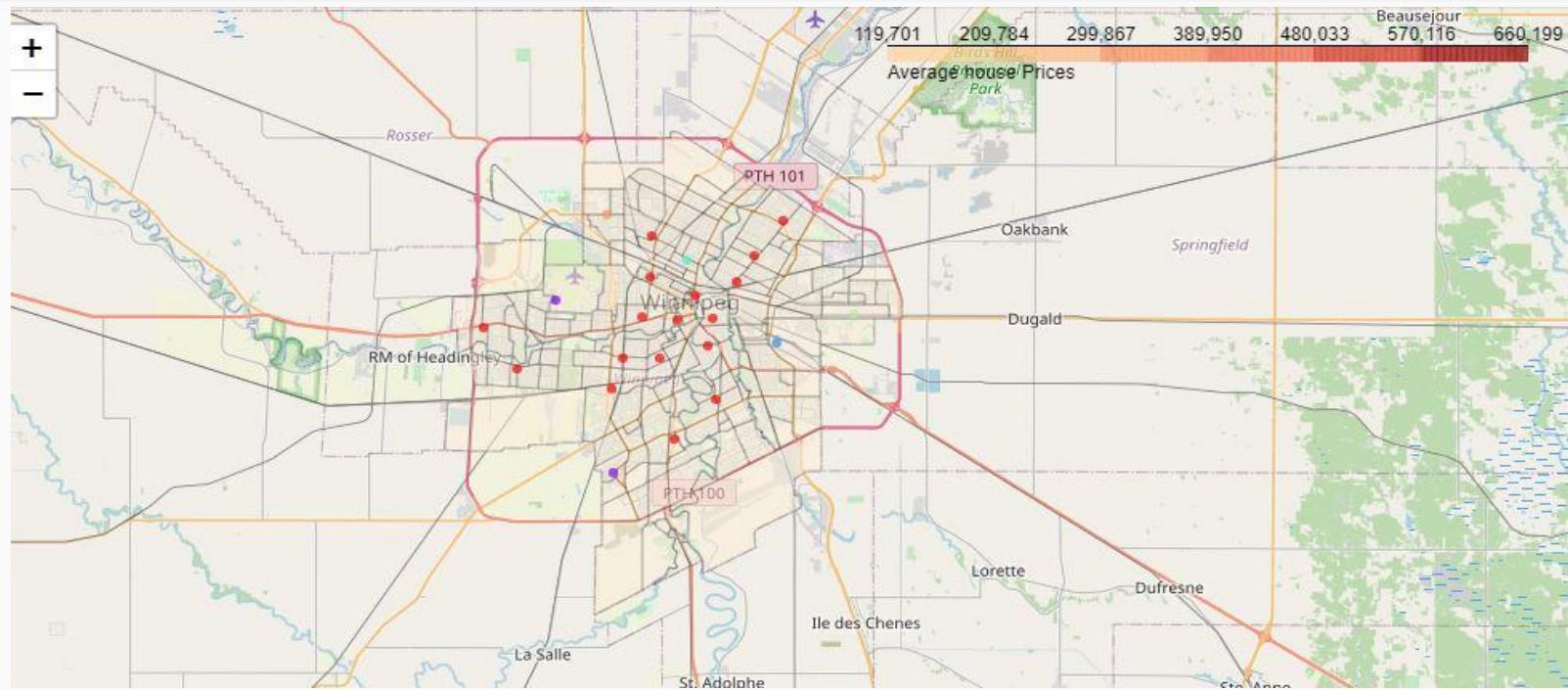


# Visualization (Clusters visualized on the map)



# Visualization

(Average house pricing on the map by using Folium chloropleth map and clusters on the top)



# Result

As a final result we can see that the average home price in Winnipeg ranges from 200,000-350,000 Canadian dollars. Some boroughs such as River Park South, Charleswood and Riverview have very high prices and are located mainly away from downtown and count with easy access to venues. While Transcona, Seven Oaks East, and Sargent Park boroughs have low property prices and are mainly north of downtown and somewhat close to venues.

# Conclusion

In this project we explored, manipulated and analyzed the data that was scattered on the Internet about the city of Winnipeg. We were able to reach results that would help real estate investors to make strategic decisions, optimize their processes and maximize their profits.