

Introduction

Toronto has one of the most expensive real estate markets in North America. Regardless of the high prices, it remains as one of the most desired cities to live in. In this report, we will take a closer look at the property prices in Toronto and try to understand what is it about a given neighbourhood that impacts the property prices. More specifically, the problem we will be addressing here is the relationship between the venues in each neighbourhood and how they might affect the property prices across Toronto.

The audience of this report is anyone who might be interested in investing in the Toronto real estate market, or any professional who would like advice their clients on where a new investment might make sense.

Data

The data we will be examining comes from the House Sales in Ontario from kaggle: <https://www.kaggle.com/mnabaee/ontarioproperties/data>. This dataset lists the property prices in Ontario along with address, area name, and latitude and longitude data on each property. Furthermore, we will be using the Foursquare API to get some useful location data about each property. The combination of these two dataset will allow us to gain some useful insight about the relationship between property prices and some of their attributes.

The images below show examples of the property prices dataset from kaggle and the location data from Foursquare:

Property Prices in Ontario:

| Unnamed: 0 | | Address | AreaName | Price (\$) | lat | lng |
|------------|---|----------------------------------|-------------------|------------|-----------|------------|
| 0 | 0 | 86 Waterford Dr Toronto, ON | Richview | 999888 | 43.679882 | -79.544266 |
| 1 | 1 | #80 - 100 BEDDOE DR Hamilton, ON | Chedoke Park B | 399900 | 43.250000 | -79.904396 |
| 2 | 2 | 213 Bowman Street Hamilton, ON | Ainslie Wood East | 479000 | 43.251690 | -79.919357 |
| 3 | 3 | 102 NEIL Avenue Hamilton, ON | Greenford | 285900 | 43.227161 | -79.767403 |
| 4 | 6 | #1409 - 230 King St Toronto, ON | Downtown | 362000 | 43.651478 | -79.368118 |

Foursquare location data:

| | Neighborhood | Neighborhood Latitude | Neighborhood Longitude | Venue | Venue Latitude | Venue Longitude | Venue Category |
|---|---------------------------|-----------------------|------------------------|-----------------------|----------------|-----------------|---------------------|
| 0 | Regent Park, Harbourfront | 43.654260 | -79.360636 | Morning Glory Cafe | 43.653947 | -79.361149 | Breakfast Spot |
| 1 | Regent Park, Harbourfront | 43.654260 | -79.360636 | Body Blitz Spa East | 43.654735 | -79.359874 | Spa |
| 2 | Garden District, Ryerson | 43.657162 | -79.378937 | Ryerson Image Centre | 43.657523 | -79.379460 | Art Gallery |
| 3 | Garden District, Ryerson | 43.657162 | -79.378937 | Balzac's Coffee | 43.657854 | -79.379200 | Coffee Shop |
| 4 | St. James Town | 43.651494 | -79.375418 | Gyu-Kaku Japanese BBQ | 43.651422 | -79.375047 | Japanese Restaurant |