



# Exploring the great offer of Airbnb in Toronto

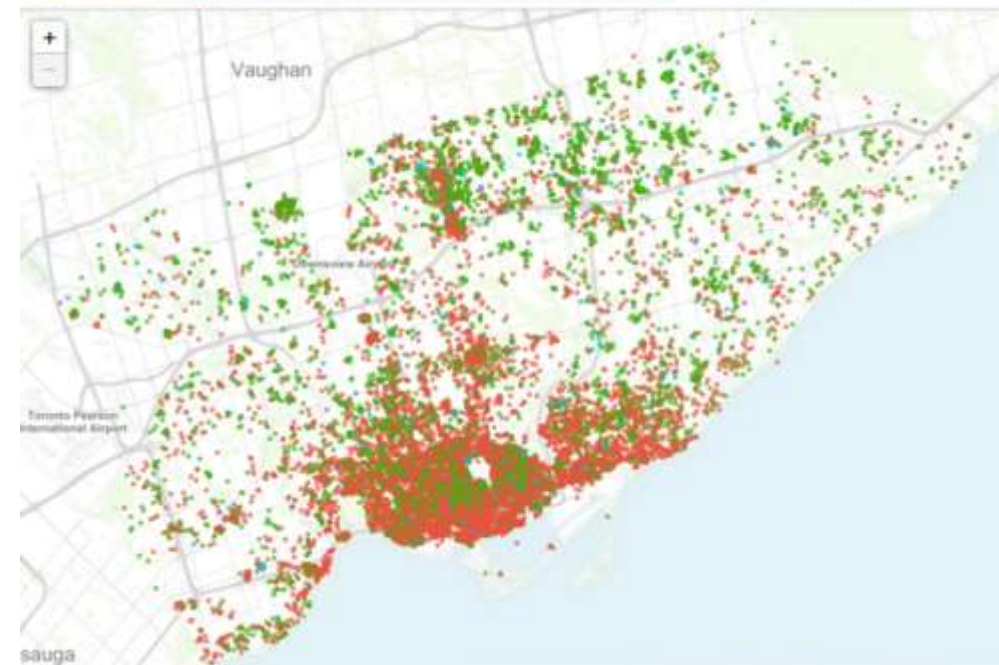
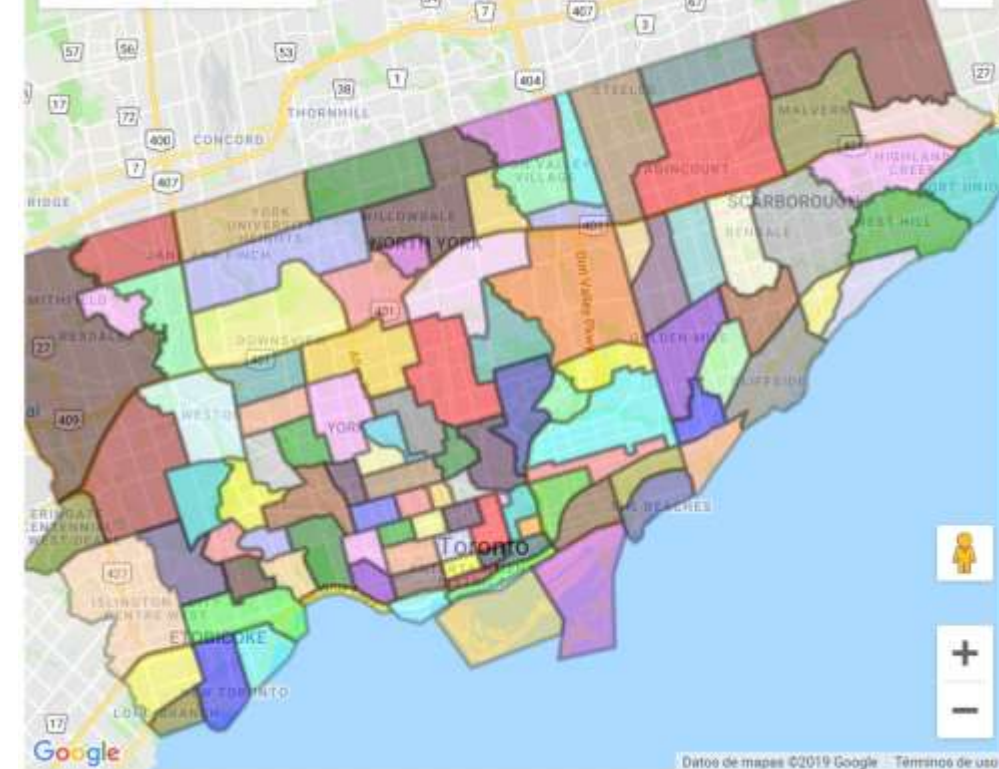
**Applied Data Science Capstone**  
**Created by: Israel Sumano**



# Problem Background

The Toronto Accommodation Offer is highly competitive. As it is a highly quoted destination in Canada, the cost of staying in Toronto (lodging, food, transportation, amenities, etc.) is considerable.

Therefore, it is vital to have good information to choose a place of accommodation that allows to balance the expenses of stay. Additionally, the thousands of offers available on the Airbnb platform make the search a stressful challenge, and sometimes, subject to “good luck”.





# Metodology

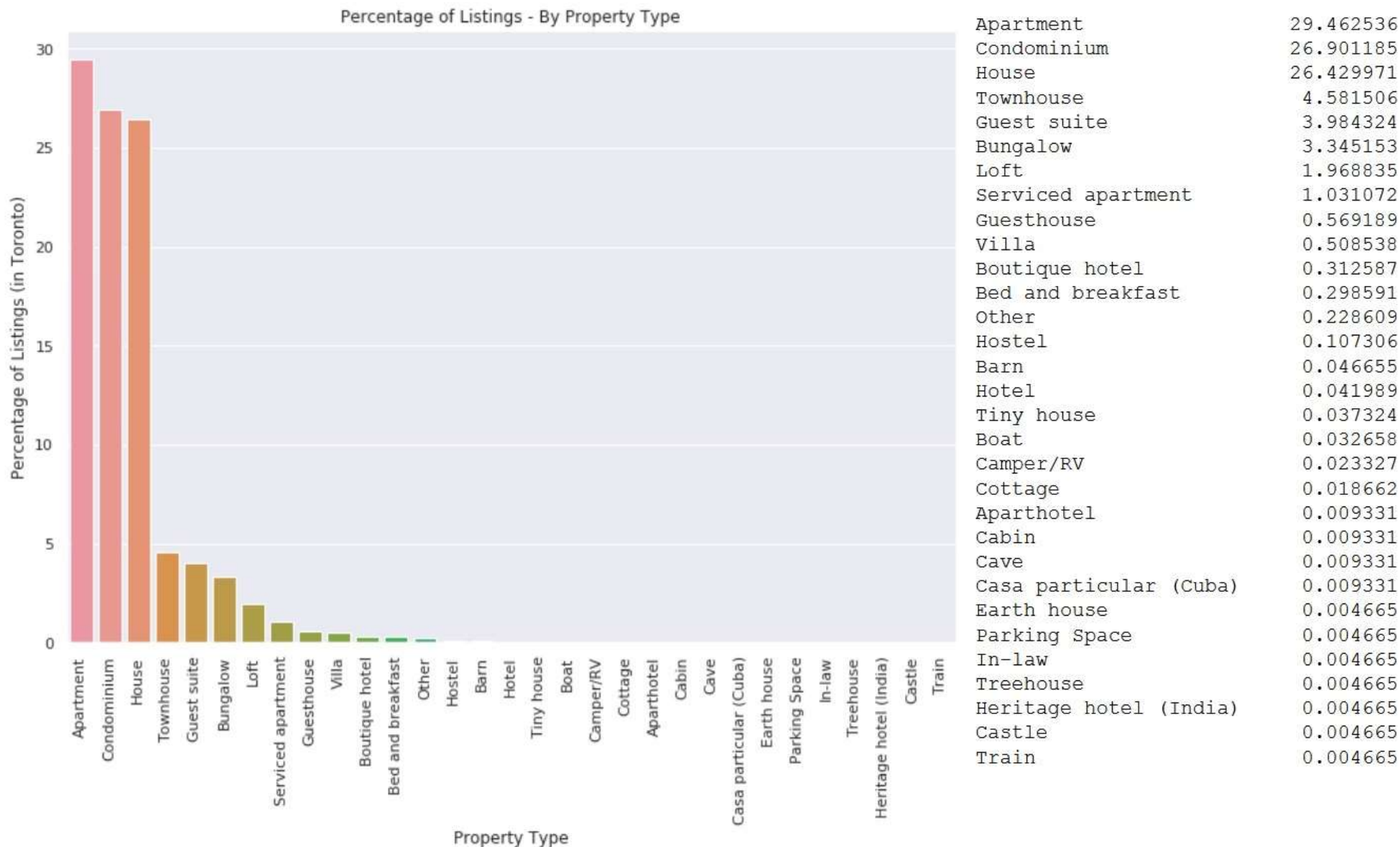
The stages considered for this study were:

- Data Manipulation
- Feature Selection
- Missing Values Handling
- Data visualization
- Outlier Removal
- Data Blending
- Normalization
- Partitioning
- Data Modeling
- Evaluating results



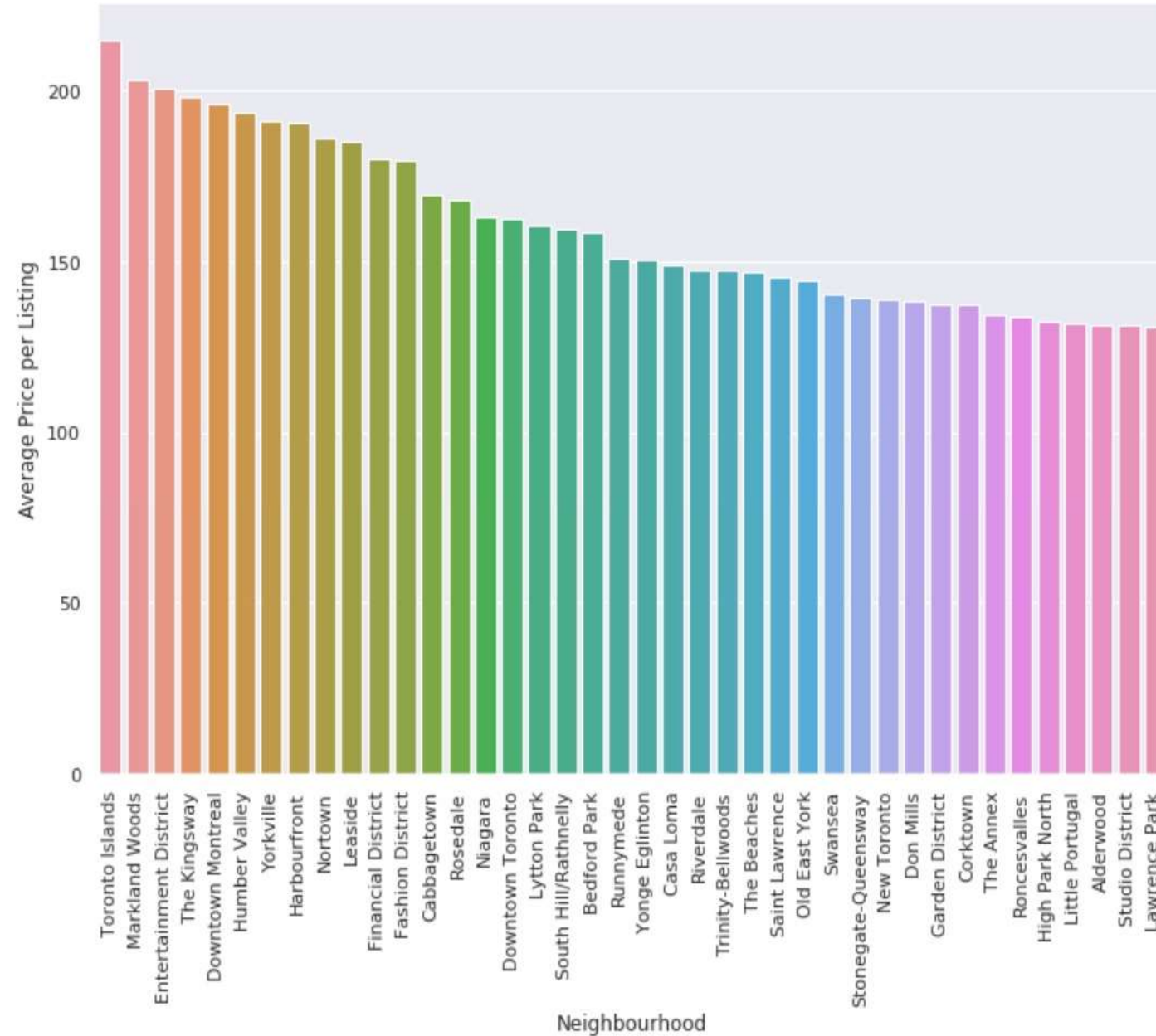


# What are the different types of properties available in Toronto?



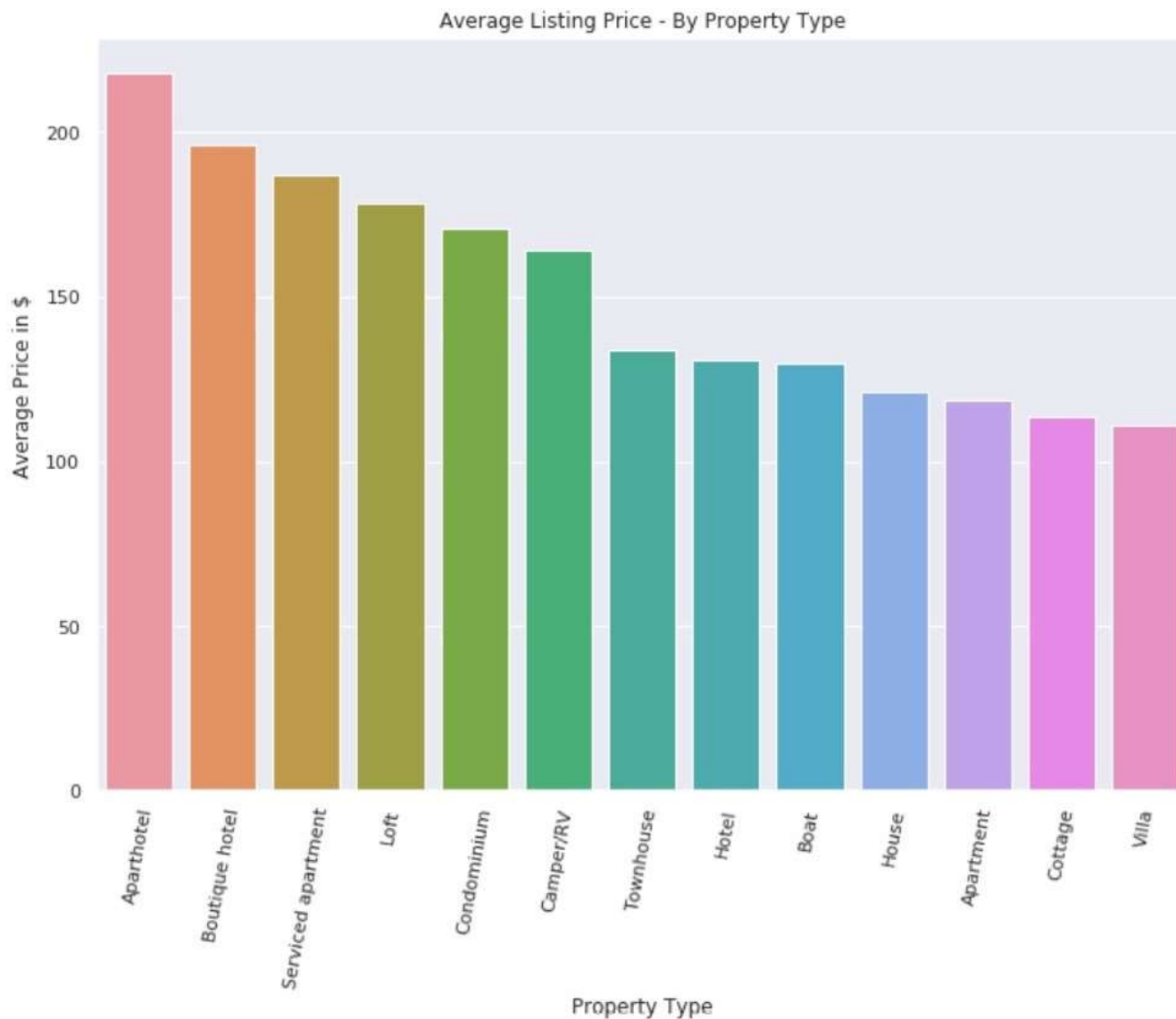


## What are neighborhoods have the most expensive listing prices on average?





# Which property types are the most expensive in Toronto?

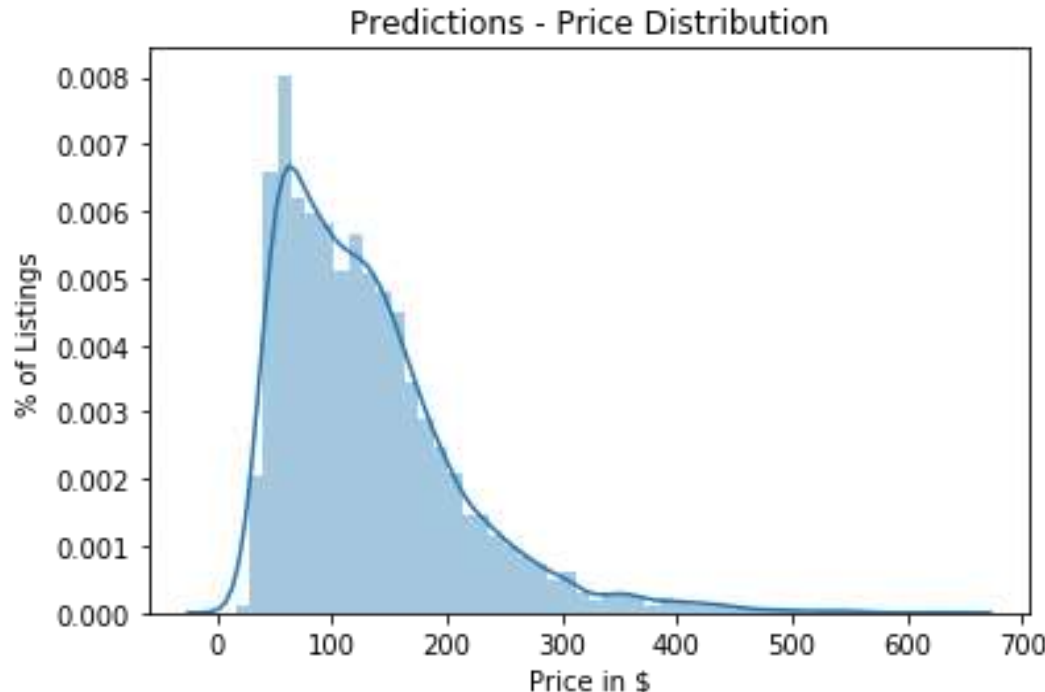
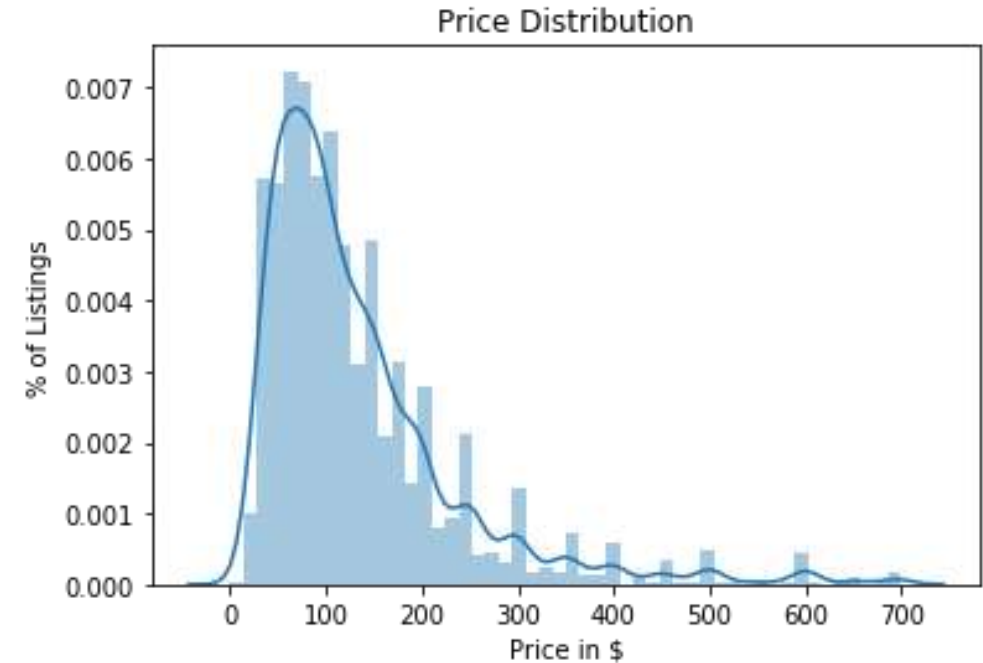


property_type	price
Aparthotel	218.00
Boutique hotel	196.06
Serviced apartment	186.73
Loft	178.15
Condominium	170.73
Camper/RV	164.00
Townhouse	133.99
Hotel	131.11
Boat	130.00
House	121.33
Apartment	118.56
Cottage	113.75
Villa	111.10



# What would be a competitive price to offer?

This is the distribution plot for the true prices in our test set. See how the fitted line is not perfectly smooth



This graph is the distribution plot of the predicted prices (with Linear Regression).

The model over estimates the number of properties in the \$100 to \$200 range. The model is also under estimating the number of higher price listings





## Final results

**What are the different types of properties available in this city?**

Apartment	29.462536
Condominium	26.901185
House	26.429971
Townhouse	4.581506

**What are neighborhoods have the most expensive listing prices on average?**

Toronto Islands	\$214.71
Markland Woods	\$203.12
Entertainment District	\$200.67
The Kingsway	\$197.93
Downtown Montreal	\$196.00

**What are the average prices by type of property for accommodation?**

Aparthotel	\$218.00
Boutique hotel	\$196.06
Serviced apartment	\$186.73
Loft	\$178.15
Condominium	\$170.73

**What would be a competitive price to offer? According to your type of property and neighborhood where it is located.**

A competitive price, regardless of the type of property, is around \$ 148.00  
Considering this price, the type of property offered can be a Condominium  
o Townhouse