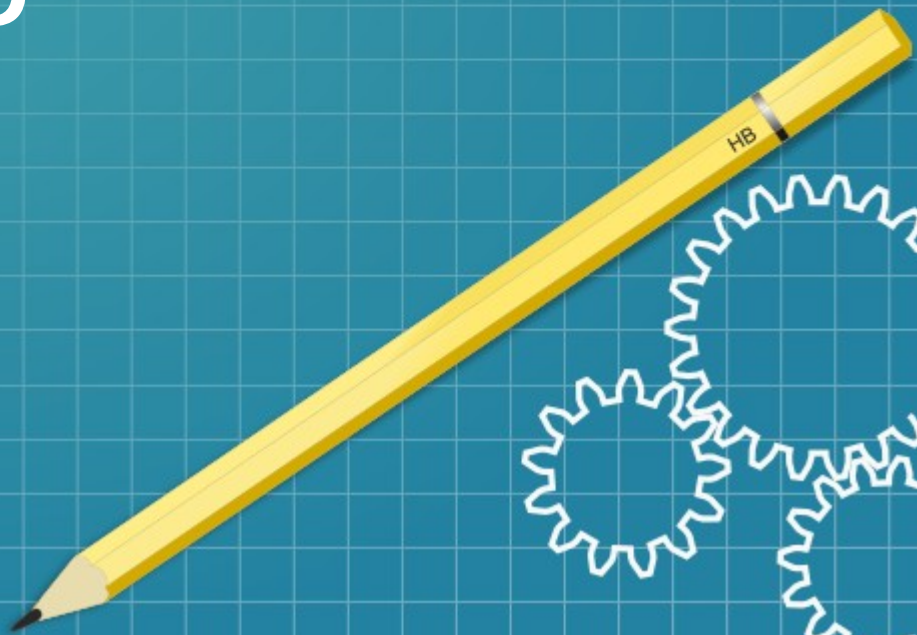
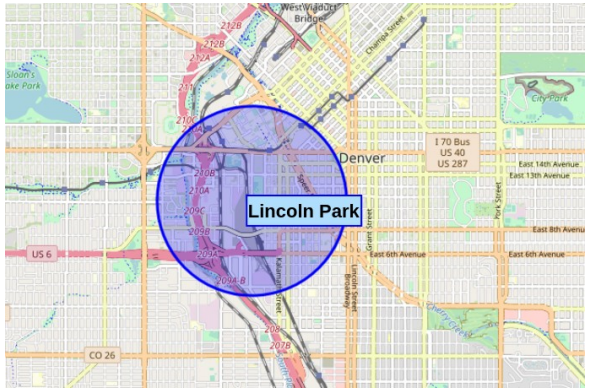
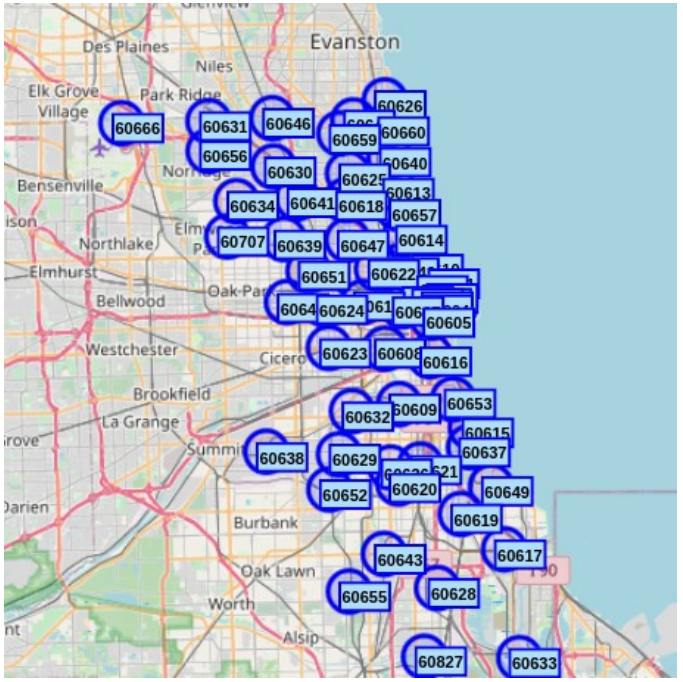
Finding Apartment in Chicago



Moving from Denver, Colorado

Billy is moving from Denver to Chicago and wants to find an apartment in a neighborhood similar to his neighborhood in Denver





Data

Data for the project was collected from APIs and downloaded form the internet.

- Geo-location coordinates (Latitude & Longitude): **Geocoder**
- Popular venues: **Foursquare**
- Chicago Postal Codes & Population/Postal Code “Chicago Population Counts“ https://data.cityofchicago.org/Health-Human-Services/Chicago-Population-Counts/85cm-7uqa
- Chicago Crime 2019 “Crimes – 2019” https://data.cityofchicago.org/Public-Safety/Crimes-2019/w98m-zvie

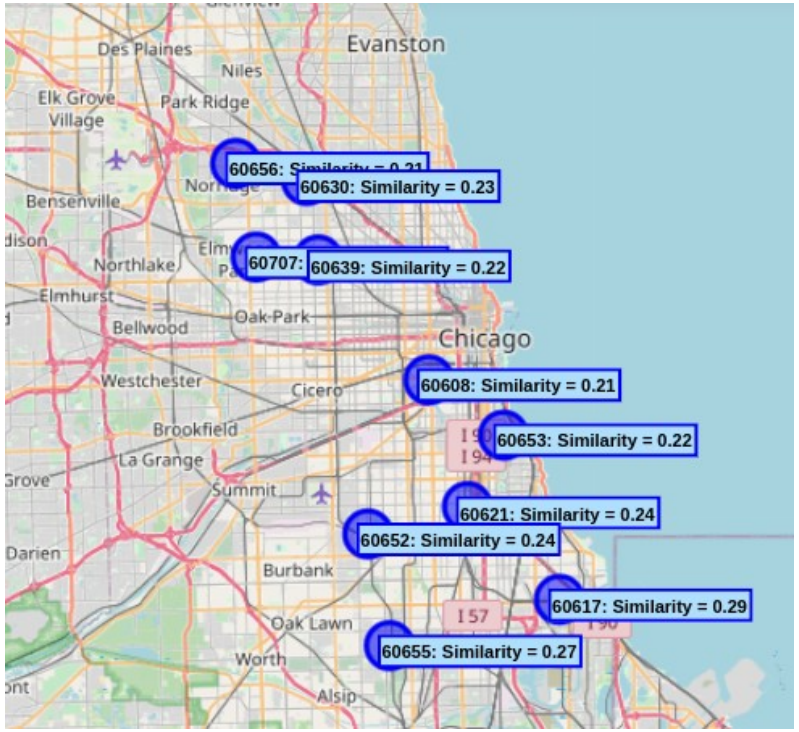
Data Cleaning

Venue dataframe with location name, location coordinates, venue, venue location, and distance from venue to location

	Center	Lat_center	Lng_center	Category	Name	Lat_venue	Lng_venue	Distance (m)
0	Lincoln Park	39.733138	-105.005241	Brewery	Renegade Brewing Company	39.730616	-104.999292	581.849369
1	Lincoln Park	39.733138	-105.005241	Japanese Restaurant	Domo Japanese Country Foods Restaurant	39.738100	-105.005650	551.998957
2	Lincoln Park	39.733138	-105.005241	Arts & Entertainment	Santa Fe Art District	39.730636	-104.998669	628.149538
3	Lincoln Park	39.733138	-105.005241	Steakhouse	The Buckhorn Exchange	39.732205	-105.005067	104.710877
4	Lincoln Park	39.733138	-105.005241	Café	The Molecule Effect	39.735386	-104.998781	607.382310

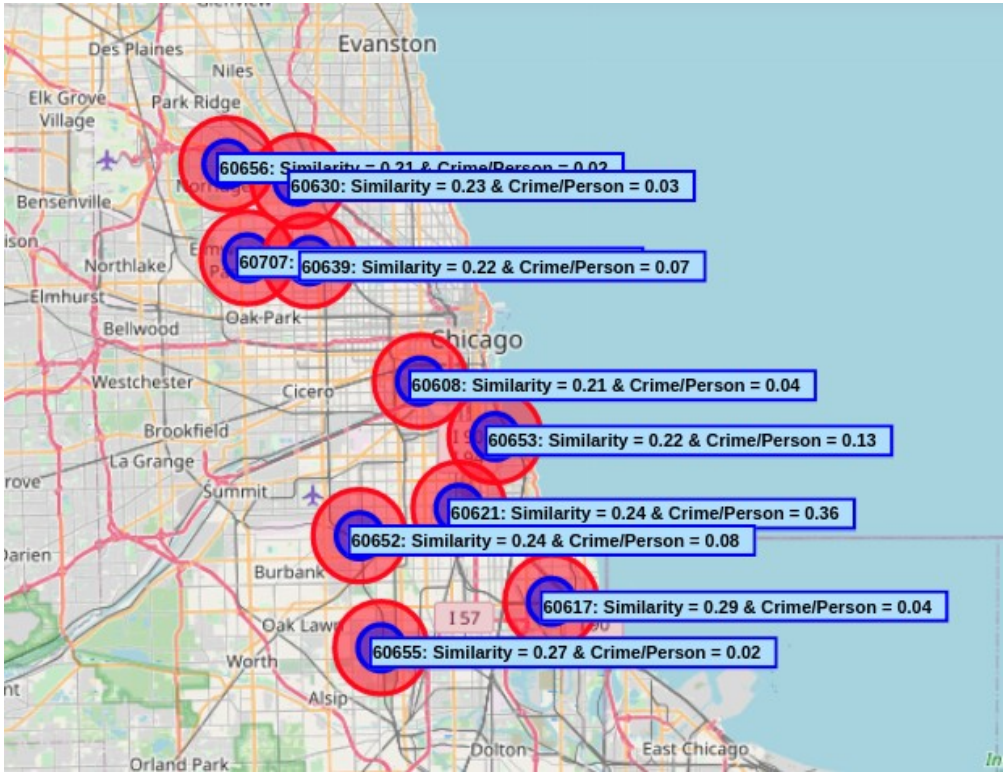
Linear Regression

Create model using Linear Regression, then use model to predict venues around each location in Chicago.



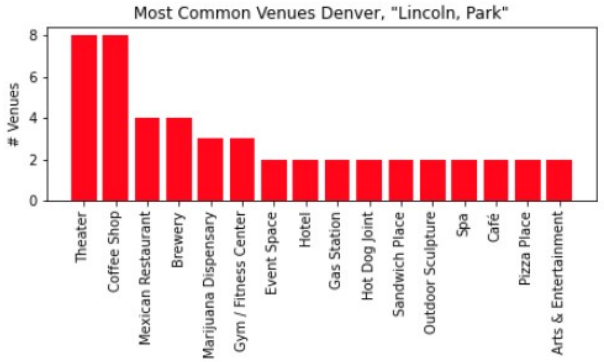
Compare Results

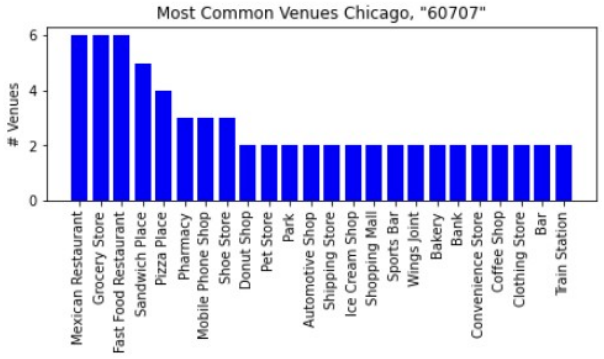
Adding crime/population to find save location for new apartment

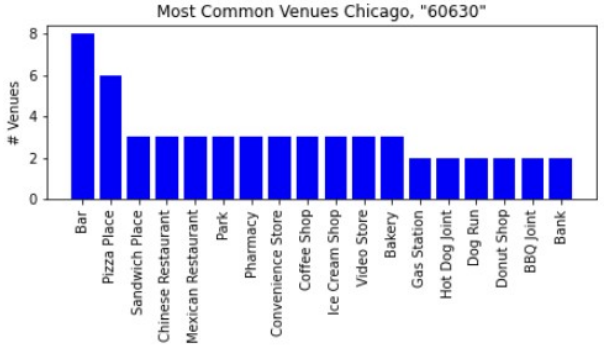


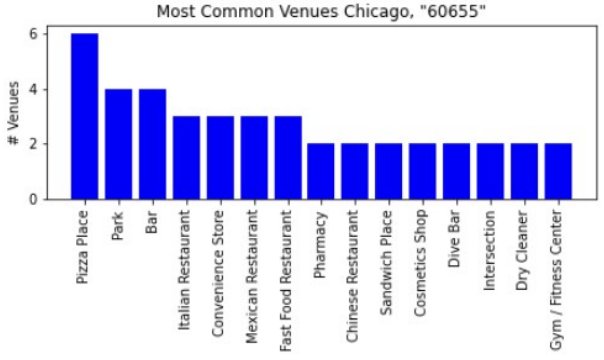
Compare Results

Venues in Denver and 3 top locations in Chicago









Conclusion

In the analysis it is shown that the northwest area of Chicago is the most similar to Lincoln Park, Denver, Colorado. In future analysis could be improved by analyzing the Chicago neighborhood in more detail. For example, the analysis could include traffic, property prices, education, ect. However, for this project I got to see how machine learning can be used to solve a real-world problem.