

Introduction

Baton Rouge is the capital of Louisiana. It undergoes constant city development. The city's open data portal provides various sources on data related to the city development, such as new residential building permits data (<https://data.brla.gov/Housing-and-Development/New-Residential-Building-Permits-by-Month/2vpm-jgm6>).

In this project, I would like to explore the relationship between investments/costs of residential projects and the surrounding venues. More specifically, to see whether higher valued residential project areas tend to have a larger number of nearby venues. Venue data can be found using the Foursquare API.

Data Preparation

Residential project data was downloaded using SODA API. A couple of filters were used to select only records from the year of 2019 and records of new residential permits.

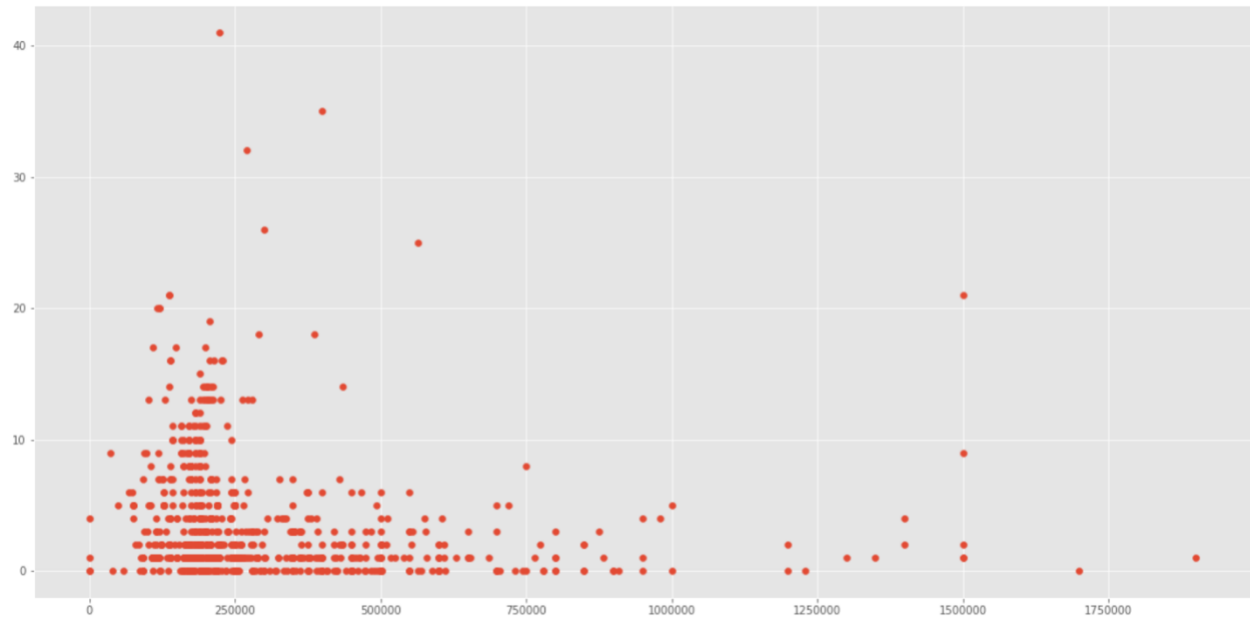
	permitid	projectvalue	lat	long
0	4119637	800000	30.3209969103081	-91.098102971848107
1	4185235	159454	30.4737849382641	-91.137516725391606
2	4078003	200000	30.447441999713099	-91.1515776038176
3	4195775	500000	30.3980164989967	-91.078969285499596
4	4014592	183066	30.384672442665298	-91.159152613815095

Thee surrounding venues were accessed through Foursquare API. For each new residential permit location, up to 10 venues within the radius of 500 m were collected.

	permitid	projectvalue	lat	long	color	NumofVenues
0	4119637	800000.0	30.3209969103081	-91.098102971848107	red	0
1	4185235	159454.0	30.4737849382641	-91.137516725391606	cornflowerblue	5
2	4078003	200000.0	30.447441999713099	-91.1515776038176	limegreen	8
3	4195775	500000.0	30.3980164989967	-91.078969285499596	red	1
4	4014592	183066.0	30.384672442665298	-91.159152613815095	limegreen	6

Analysis and Result

A scatterplot was plotted first to visually examine the relationship between project value and number of surrounding venues. As shown below, there does not seem to be a linear relationship. A correlation of -0.11983753925088309 (pearson's r) confirmed this observation.



Conclusion

Based on Baton Rouge's new residential permit data from the year of 2019, there is not a correlation between new residential project values and the number of surrounding venues.