

Comparing Arcadia, CA and Monterey Park, CA for Apartment Development Project

CAPSTONE PROJECT

by

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Acknowledgment

This project is a part of the IBM Applied Data Science capstone project. In this project, I compare the city of Arcadia, CA and Monterey Park, CA venues, school quality, and crime for a developer of an apartment. I would like to express my deep appreciation to the lecturers of the IBM Data Science for creating an exceptional lectures and lab materials and for guiding me in creating this report.

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Data

List of data which will be used in this report:

1. We will use **Foursquare** to explore the dining and recreations around the neighborhood of Arcadia and Monterey Park, CA, then show the results in maps and a tables.
2. The crime data is obtained from [FBI Report of Offenses Known to Law Enforcement](#). The data of both cities will be presented in a graph. Note that this data is a 2016 data, but hopefully it will give us an idea of the crime in these cities.
3. For the school district data, we will use [California School Districts by U.S. News in the 2017-18 academic year](#). The data shows college readiness, mathematics proficiency, and English proficiency for each school district in California. We will use a bar graph to compare the school districts which serve high schools in Arcadia, CA and Monterey Park, CA.

Python Codes

List of Python codes which are used to create this report:

1. Analysis of the dining and recreations or venues: Week 5 Final Capstone Project Part1.ipnb.
2. Analysis of the crime: Week 5 Final Capstone Project Part2.ipnb.
3. Analysis of the schools quality: Week 5 Final Capstone Project Part3.ipnb.

Introduction

1.1 Background

A Chinese developer is interested to build an apartment in one of Los Angeles county areas which is predominantly populated by Asian. Right now, they are considering to build an apartment in either Arcadia, CA or Monterey Park, CA which are among the top popular place for the Chinese to live. The goal of this report is to provide the developer some information about these two locations, to describe the pro and con of building an apartment in one of these cities, and hopefully be able to help them make a decision.

1.2 Why Arcadia, CA and Monterey Park, CA?

1.2.1 Dining and Recreation

Both Arcadia and Monterey Park have plenty of top rated Asian restaurants. Many Asians from other cities are willing to drive an extra miles so they can enjoy the food in either Arcadia, CA or Monterey Park, CA. Similarly, both offering residents attractive, well-maintained public parks at locations central to the residential neighborhoods. Both cities residents also have opportunities to use public school facilities for recreation.

1.2.2 School

Currently Arcadia Unified School District is ranked as top 3 Best 2020 Public School Districts with grade A+ in the Los Angeles Area, while Monterey Park schools which are served by the Alhambra,

Garvey, Los Angeles, and Montebello school districts received grade A, B, B-, and C- respectively [1]. Note that Garvey school district only manages the elementary schools. Since the rental cost in Arcadia is higher than that in Monterey Park, Arcadia seems to be more attractive for those with children and is willing to spend an extra budget to give their children quality education. Still, we will presents some data related to the school quality for the developer to consider.

1.2.3 Safety and Public Transportation

According to [Neighborhood Scout](#), the crime index in Arcadia is 20, i.e., it is safer than 20% of U.S. Cities, while the crime index in Monterey Park is 16, i.e., it is safer than 16% of U.S. Cities. Therefore, Arcadia seems to do a little better than Monterey Park in term of safety. In term of public transportation, both Arcadia and Monterey Park have Metro Bus Lines which provides an excellent service to the community (Figure 1.1) [2]. It is something that the renters of an apartment are looking for when choosing a place to live. We will analyze some crime data to help the investor decide whether it good to invest in one of these cities.

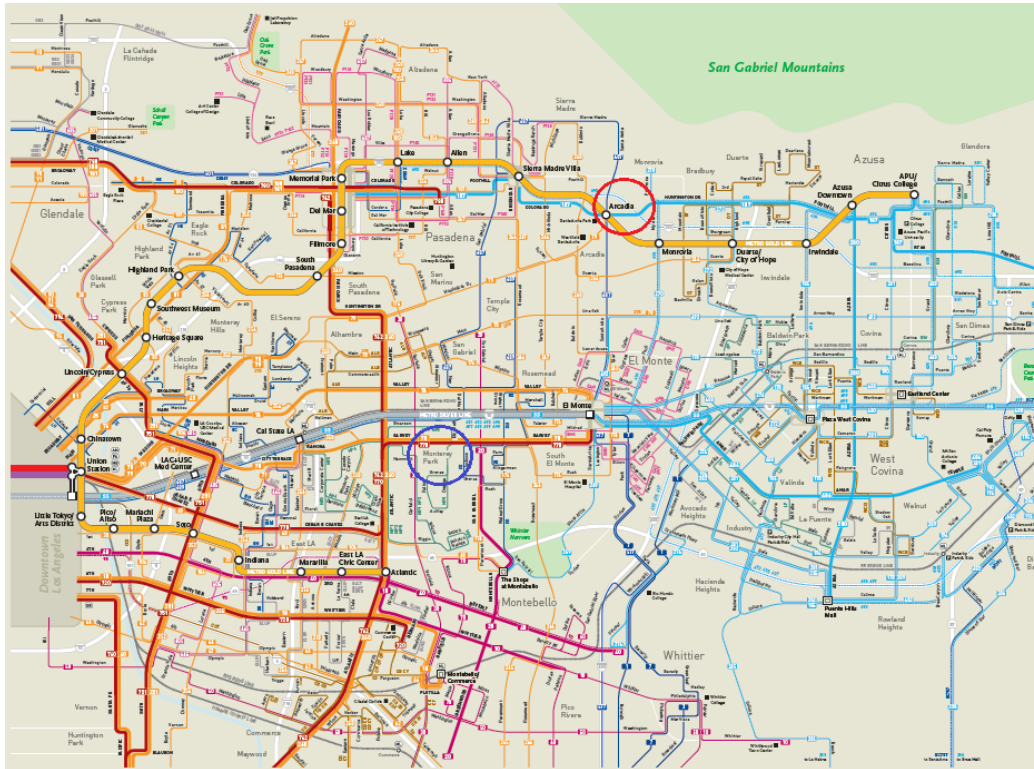


Figure 1.1: San Gabriel Valley Metro system maps. The orange, light blue, dark blue, red, and purple lines serve Arcadia, CA (in red circle) and Monterey Park, CA (in blue circle)

Methodology

2.1 Dining and Recreation

The goal of the dining and recreation or venues analysis is to find the number of venues in Arcadia, CA and Monterey Park, CA. We use Foursquare to find the number of unique venues in each cities and then combine the data so we can make a comparison. We also creates two maps for each city which show the location of the venues.

Since Foursquare is unable to locate the latitude and longitude of Arcadia, CA correctly, we use Westfield Santa Anita latitude and longitude as the center of the map since it is the most popular place in this city. We entered the location of the Westfield Santa Anita into Foursquare explore queries to find 100 venues within 7500 meter radius of the center.

Similar, for the city of Monterey Park, CA, we use the Atlantic Times Square as the center of the map since it is the most popular place to visit. Then we entered the latitude and longitude of the Atlantic Times Square into Foursquare explore queries to find 100 venues within 7500 meter radius of the center.

2.2 School Quality

The objective of the school quality analysis is to show developer if Arcadia, CA and Monterey Park, CA are worthy of their investment. The public school quality in an area is something which a tenant or a property owner with children consider when buying or renting a property. Additionally, it is one of the aspects that can drive the value of a property up or down.

For this analysis, we took the data from [California School Districts by U.S. News](#). This data

show the college readiness, mathematics proficiency, and English proficiency of 553 school districts supporting 2,605 high schools in the cities of California in the 2017-18. Since we need to only gather four school districts: Arcadia Unified (for the city of Arcadia, CA), Alhambra Unified, Los Angeles Unified, and Montebello Unified (for the city of Monterey Park, CA), we copied and pasted the data into Microsoft Excel and saved it as CSV file for the Python to read and analyze. We created a bar graph to show the result of the analysis.

2.3 Safety

For the safety or crime analysis we took the Arcadia, CA and Monterey Park, CA crime data from [FBI 2016 Crimes in the United States](#), then we multiplied the number of each incident by $\frac{10,000}{\text{population of the corresponding city}}$ in order to get the number of incidents per 10,000 residents. Afterwards, we created a bar graph which show the number of incidents per 10,000 for each city side by side.

Results

3.1 Dining and Recreation

3.1.1 Arcadia, CA

From Foursquare venues exploration, we are able to get 100 venues around the Westfield Santa Anita Mall at Arcadia, CA. The table below show 20 venues which are the closest to the mall (Figure 3.1). It shows that there are plenty of fine dining, several grocery stores, a park and two gardens.

	name	categories	address	city	distance
0	Uncle Tetsu Japanese Cheesecake	Dessert Shop	400 S Baldwin Ave	Arcadia	75
1	Lady M Cake Boutique	Bakery	400 S Baldwin Ave	Arcadia	76
2	Din Tai Fung	Dumpling Restaurant	400 S Baldwin Ave	Arcadia	77
3	Nordstrom	Department Store	400 S Baldwin Ave	Arcadia	129
4	Chick-fil-A	Fast Food Restaurant	400 S Baldwin Ave	Arcadia	220
5	Wood Ranch BBQ & Grill	BBQ Joint	400 S. Baldwin Avenue	Arcadia	261
6	Dumpling House	Dumpling Restaurant	921 S Baldwin Ave #A	Arcadia	628
7	Kee Wah Bakery	Bakery	1010 S Baldwin Ave	Arcadia	711
8	Phoenix Food Boutique	Chinese Restaurant	1108 S Baldwin Ave	Arcadia	845
9	Waterfall	Sculpture Garden	NaN	Arcadia	845
10	Santa Anita Park	Racetrack	285 W Huntington Dr	Arcadia	941
11	Los Angeles County Arboretum and Botanic Garden	Garden	301 N Baldwin Ave	Arcadia	1066
12	Daiso Japan	Department Store	1205 S Baldwin Ave	Arcadia	1082
13	Tropical Greenhouse	Nature Preserve	NaN	Arcadia	1288
14	ALDI	Grocery Store	1403 S Baldwin Ave	Arcadia	1292
15	Half & Half Tea Express 伴伴堂	Tea Room	1421 S Baldwin Ave	Arcadia	1333
16	Moffett's Chicken Pie Shoppe	American Restaurant	1409 S Baldwin Ave	Arcadia	1336
17	H Mart	Grocery Store	1101 W Huntington Dr	Arcadia	1352
18	Tous Les Jours	Bakery	NaN	Arcadia	1356
19	Arcadia County Park	Park	405 S Santa Anita Ave	Arcadia	1673

Figure 3.1: Twenty venues which are the closest to the Westfield Santa Anita Mall.

Moreover, we were able to use Folium from Python to map all 100 venues in Figure 3.2 below. Note that the big blue circle with red outline at the center of the map is the location of the Westfield Santa Anita mall. We can see there are plenty of venues where the residents in Arcadia, CA can enjoy without having to travel to other cities.

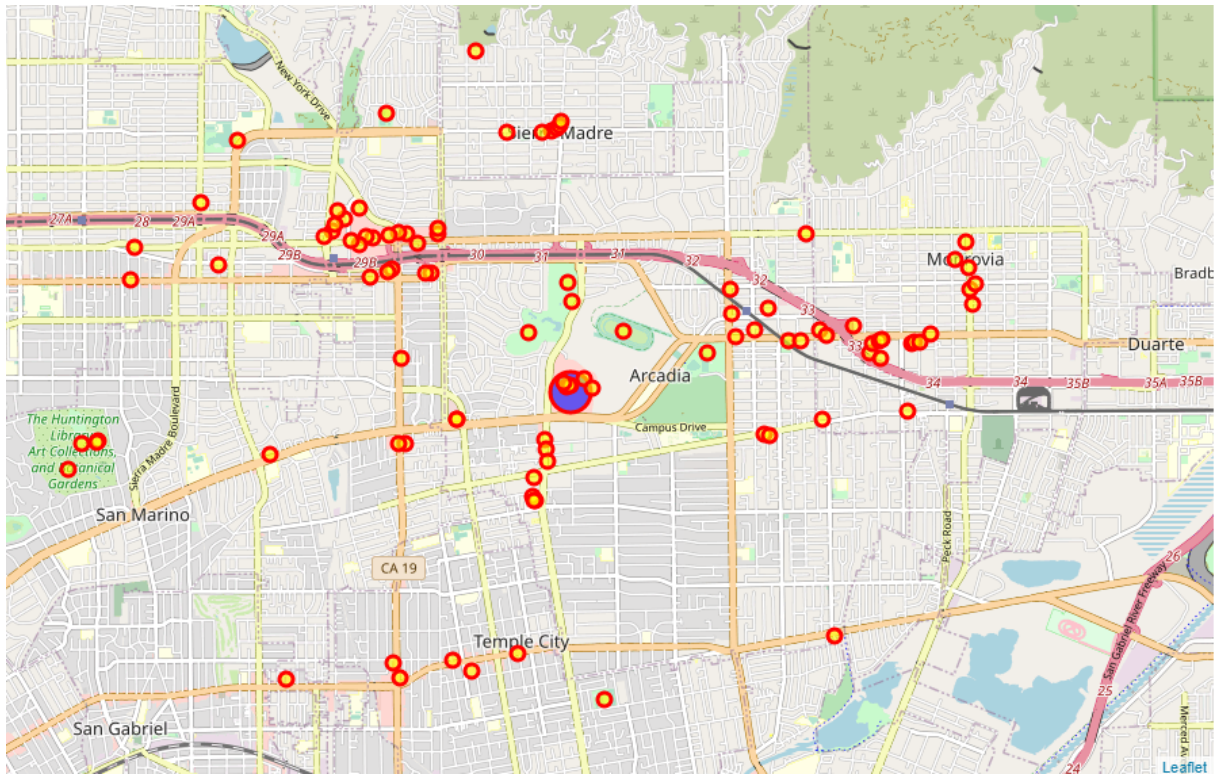


Figure 3.2: Map of venues surrounded the Westfield Santa Anita mall (mark by big blue circle with red outline).

Using the cluster method of Python, we were able to cluster the venues to get a better idea of the number of venues surrounding the Westfield Santa Anita mall which is marked by the big blue circle with red outline (Figure 3.3).

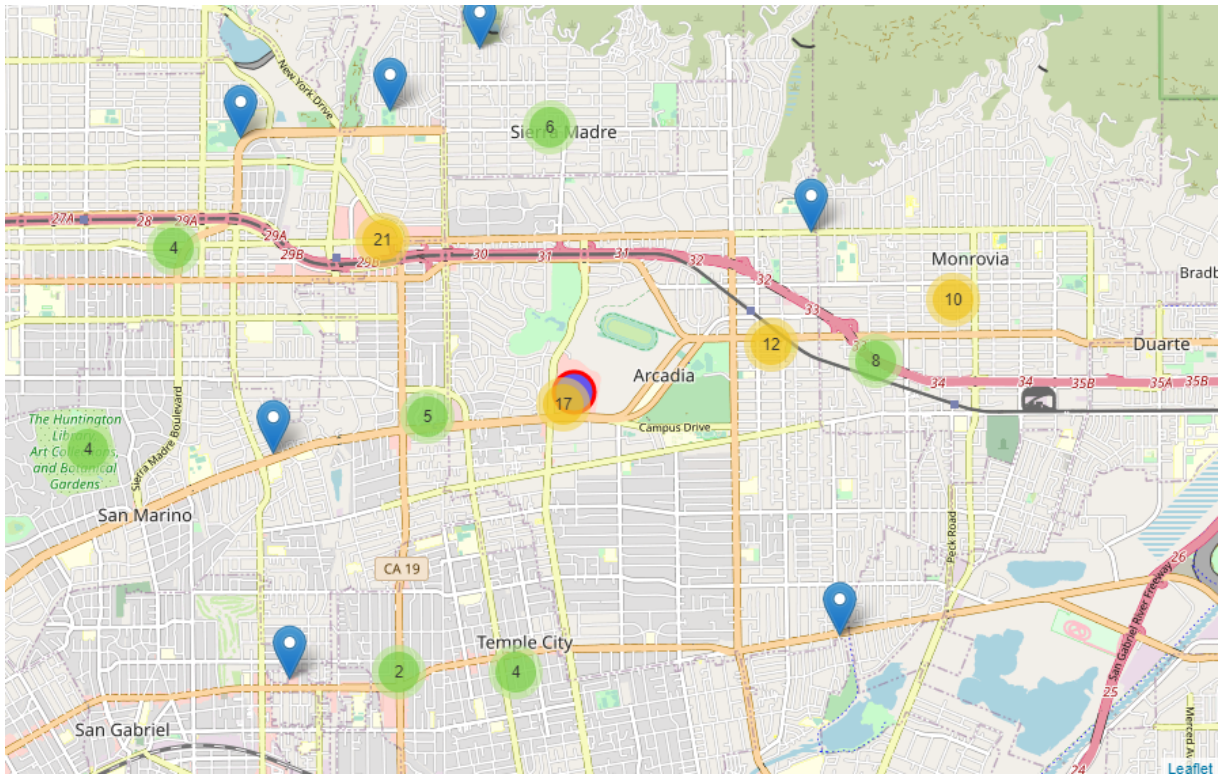


Figure 3.3: The clusters of venues surrounding the Westfield Santa Anita mall which is marked by the big blue circle with red outline.

3.1.2 Monterey Park, CA

Similarly, using Foursquare venues exploration, we are able to obtain 100 venues around Atlantic Times Square at Monterey Park, CA. The table below show 20 venues which are the closest to this location (Figure 3.4). From the table we can see that there are several fine dining, a convenience store, and two parks. These are something the tenants or buyer of an apartment are looking for when renting or purchasing a property.

	name	categories	address	city	distance
0	Daiso Japan	Convenience Store	500 N Atlantic Blvd Ste 115	Monterey Park	51
1	Phoenix Food Boutique	Chinese Restaurant	500 N Atlantic Blvd # C-120	Monterey Park	124
2	Huge Tree Pastry	Taiwanese Restaurant	423 N Atlantic Blvd # 105-106	Monterey Park	184
3	Hooshik	Dessert Shop	141 N Atlantic Blvd #103	Monterey Park	517
4	Tokyo Fried Chicken Co.	Fried Chicken Joint	122 S Atlantic Blvd	Monterey Park	795
5	Chengdu Taste	Szechuan Restaurant	828 W Valley Blvd	Alhambra	1012
6	Granada Park	Park	2000 W. Hellman Ave	Alhambra	1083
7	Angelo's Italian Restaurant & Pizzeria	Italian Restaurant	1540 W Valley Blvd	Alhambra	1103
8	P.P. Pop (一條龍)	Chinese Restaurant	127 N Garfield Ave	Monterey Park	1142
9	Pepe's Mexican Food	Mexican Restaurant	511 W Valley Blvd	Alhambra	1171
10	Banh Mi My Tho	Vietnamese Restaurant	304 W Valley Blvd	Alhambra	1247
11	Mama Lu's Dumpling House	Dumpling Restaurant	153 E Garvey Ave	Monterey Park	1311
12	John's Kabobs	Mediterranean Restaurant	440 S Atlantic Blvd	Monterey Park	1360
13	The Hat	Sandwich Place	1 W Valley Blvd	Alhambra	1452
14	Baja Cali Fish & Tacos	Taco Place	2001 W Valley Blvd	Alhambra	1464
15	Savoy Kitchen	Chinese Restaurant	138 E Valley Blvd	Alhambra	1581
16	Vittoria Pizza	Italian Restaurant	2622 W Valley Blvd	Alhambra	1937
17	Just Grillin'	Burger Joint	1129 S Fremont Ave	Alhambra	2170
18	Highlands Park	Park	400 Casuda Canyon Dr	Monterey Park	2212
19	Kim Tar Restaurant	Chinese Restaurant	964 E Garvey Ave	Monterey Park	2331

Figure 3.4: Twenty venues which are the closest to the Atlantic Times Square.

Using the Folium from Python, we mapped all 100 venues in Figure 3.5 with the big blue circle with red outline as the location of the Atlantic Times Square. We can see that in comparison to Arcadia, CA, most of the venues in Monterey Park, CA lie on the major streets which are Atlantic Boulevard and Main Street.

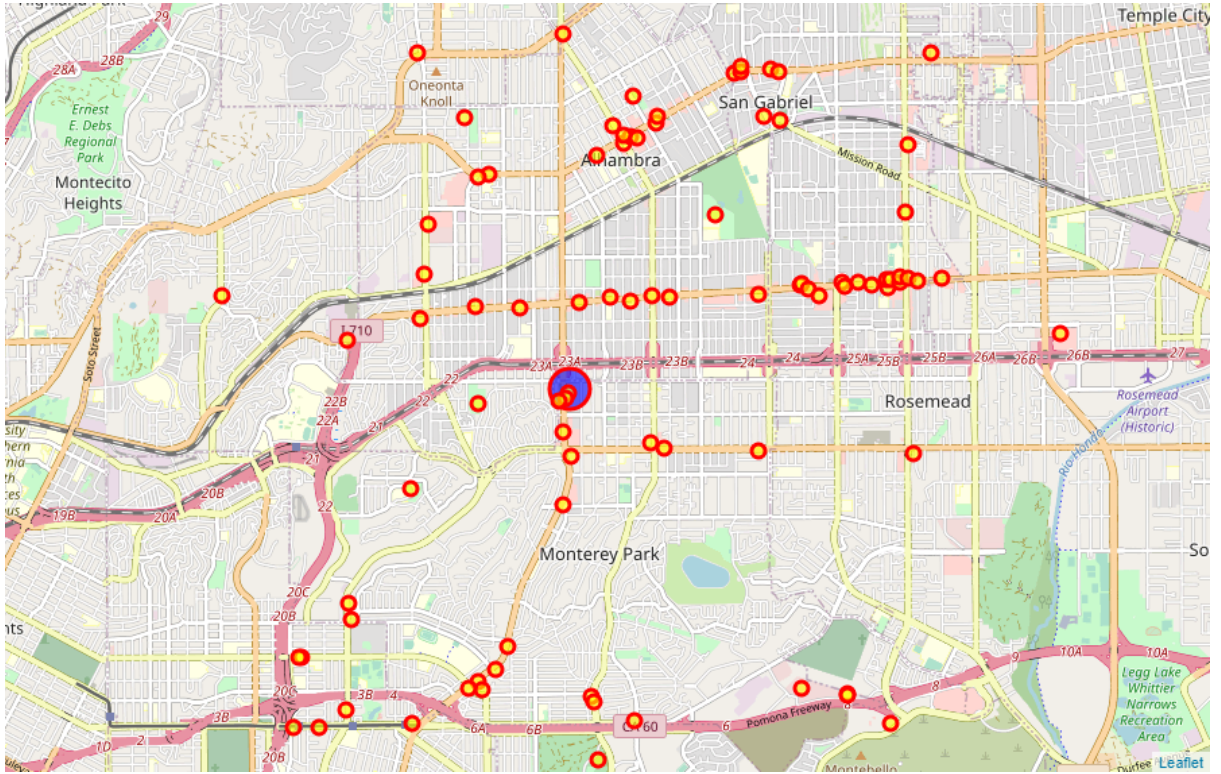


Figure 3.5: Map of venues surrounded the Atlantic Times Square (mark by big blue circle with red outline).

Lastly, using the cluster method of Python, we were able to cluster the venues to get a better idea of the number of venues surrounding the Atlantic Times Square which is marked by the big blue circle with red outline (Figure 3.6).

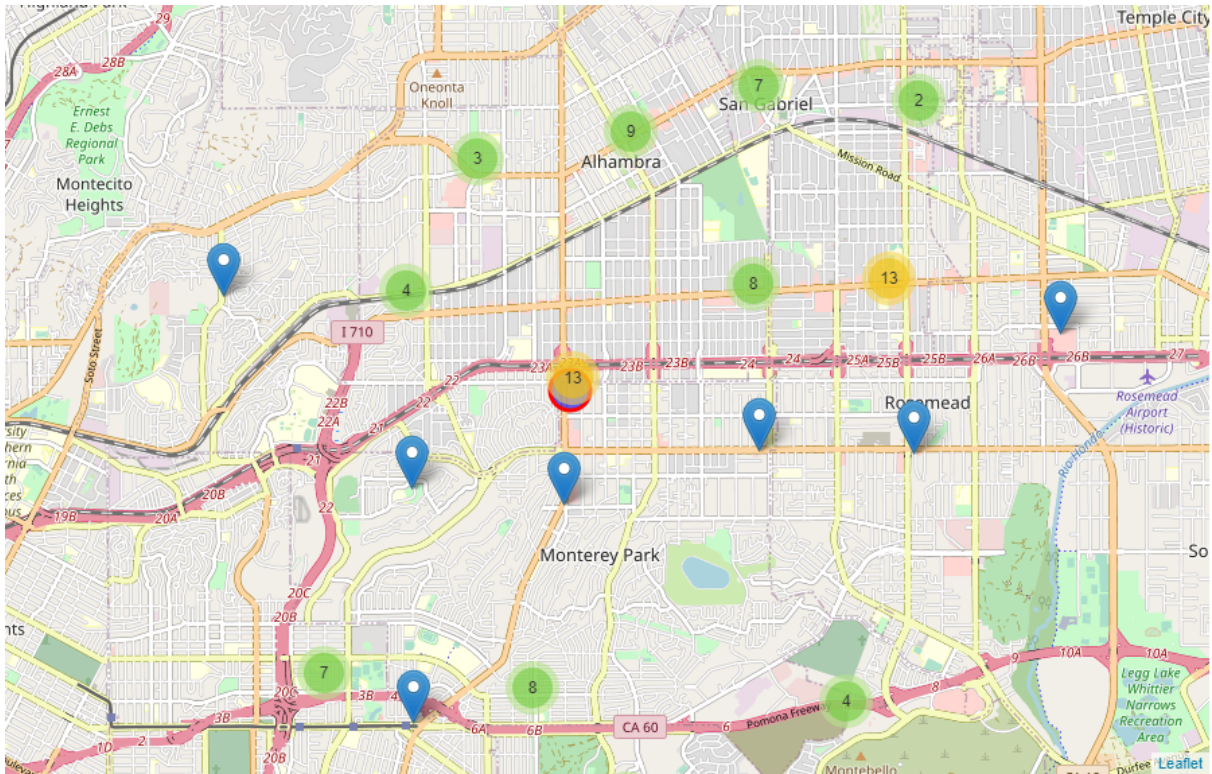


Figure 3.6: Clusters of venues surrounding the Atlantic Times Square which is marked by the big blue circle with red outline.

3.1.3 Comparing Arcadia, CA and Monterey Park, CA Venues

The table in Figure 3.7 show the number of venues of each city in each category side by side. We can see that each city has a diverse venues which is something that any tenant or property buyer is interested at when looking for an apartment.

	Categories	Arcadia Counts	Monterey Park Counts		Categories	Arcadia Counts	Monterey Park Counts
0	Grocery Store	8	1	34	New American Restaurant	1	0
1	Bakery	7	4	35	Sculpture Garden	1	0
2	Park	5	6	36	Sushi Restaurant	1	0
3	Chinese Restaurant	4	14	37	Liquor Store	1	0
4	Sandwich Place	4	4	38	Brewery	1	0
5	Burger Joint	4	3	39	Gift Shop	1	0
6	Mexican Restaurant	4	4	40	Thai Restaurant	1	0
7	Fast Food Restaurant	4	4	41	Nature Preserve	1	0
8	Furniture / Home Store	3	0	42	Sporting Goods Shop	1	0
9	Department Store	3	0	43	Indian Restaurant	1	0
10	Coffee Shop	3	2	44	Supermarket	1	1
11	Garden	3	0	45	Convenience Store	0	4
12	American Restaurant	3	0	46	Italian Restaurant	0	3
13	Pet Store	3	1	47	Hotel	0	3
14	Pizza Place	3	5	48	Szechuan Restaurant	0	2
15	Gym / Fitness Center	2	0	49	Restaurant	0	2
16	Smoke Shop	2	0	50	Taco Place	0	2
17	Breakfast Spot	2	0	51	Food	0	2
18	Discount Store	2	1	52	Vegetarian / Vegan Restaurant	0	1
19	Farmers Market	2	1	53	Movie Theater	0	1
20	Dessert Shop	2	2	54	Mediterranean Restaurant	0	1
21	Ice Cream Shop	2	1	55	Hot Dog Joint	0	1
22	Tea Room	2	0	56	Fried Chicken Joint	0	1
23	Dumpling Restaurant	2	1	57	Warehouse Store	0	1
24	Korean Restaurant	1	2	58	Juice Bar	0	1
25	Racetrack	1	0	59	Taiwanese Restaurant	0	1
26	Vietnamese Restaurant	1	4	60	Garden Center	0	1
27	Japanese Restaurant	1	1	61	Bubble Tea Shop	0	1
28	Health & Beauty Service	1	0	62	Seafood Restaurant	0	1
29	BBQ Joint	1	1	63	Latin American Restaurant	0	1
30	Café	1	3	64	Asian Restaurant	0	1
31	Museum	1	0	65	Church	0	1
32	Cosmetics Shop	1	1	66	Butcher	0	1
33	Steakhouse	1	0				

Figure 3.7: Number of venues in each category in Arcadia, CA and Monterey Park, CA

3.2 School Quality

The graph in Figure 3.8 depicts the college readiness, mathematics and English proficiency of Arcadia, CA and Monterey Park, CA. Arcadia Unified is the district which manages the high schools in Arcadia, CA, while Alhambra, Los Angeles Unified, and Montebello Unified manage high schools in Monterey Park, CA.

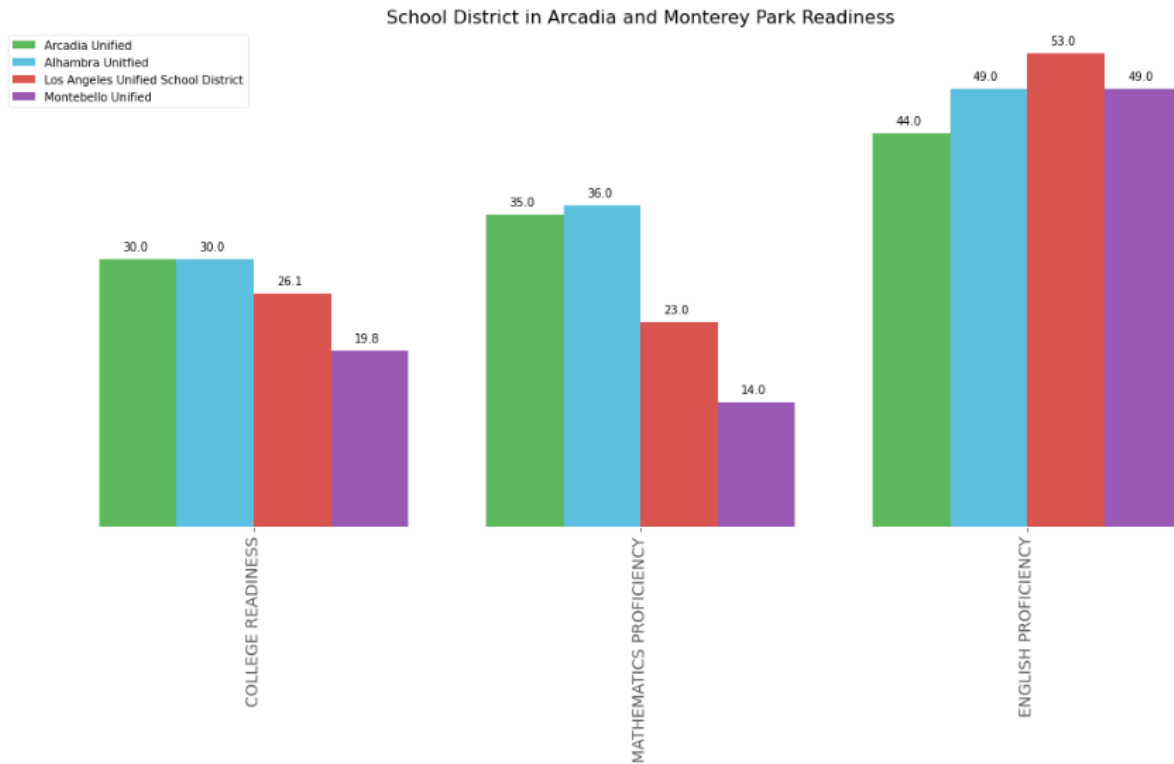


Figure 3.8: College readiness, mathematics and English proficiency of Arcadia, CA and Monterey Park, CA. Arcadia Unified is the district which manages the high schools in Arcadia, CA, while Alhambra, Los Angeles Unified, and Montebello Unified manage high schools in Monterey Park, CA

We can see that Arcadia and Alhambra Unified are pretty much equivalent in terms of college readiness and mathematics proficiency. While perform below Arcadia and Alhambra Unified, Los Angeles Unified is doing better than Montebello Unified in college readiness and mathematics proficiency. Lastly, in term of English proficiency, Los Angeles Unified is at the top, while the other districts perform a little below it.

3.3 Safety

Figure 3.9 shows the incidents in Arcadia, CA and Monterey Park, CA per 10,000 residents in 2016. It shows that both cities have a pretty much similar low number of incidents of murder & nonnegligent manslaughter, rape, robbery, aggravated assault, and arson. We see that Monterey Park did a little better than Arcadia in terms of violent crime and motor vehicle theft. However, in terms of property crime, burglary, and larceny theft, Monterey Park is far better than Arcadia.

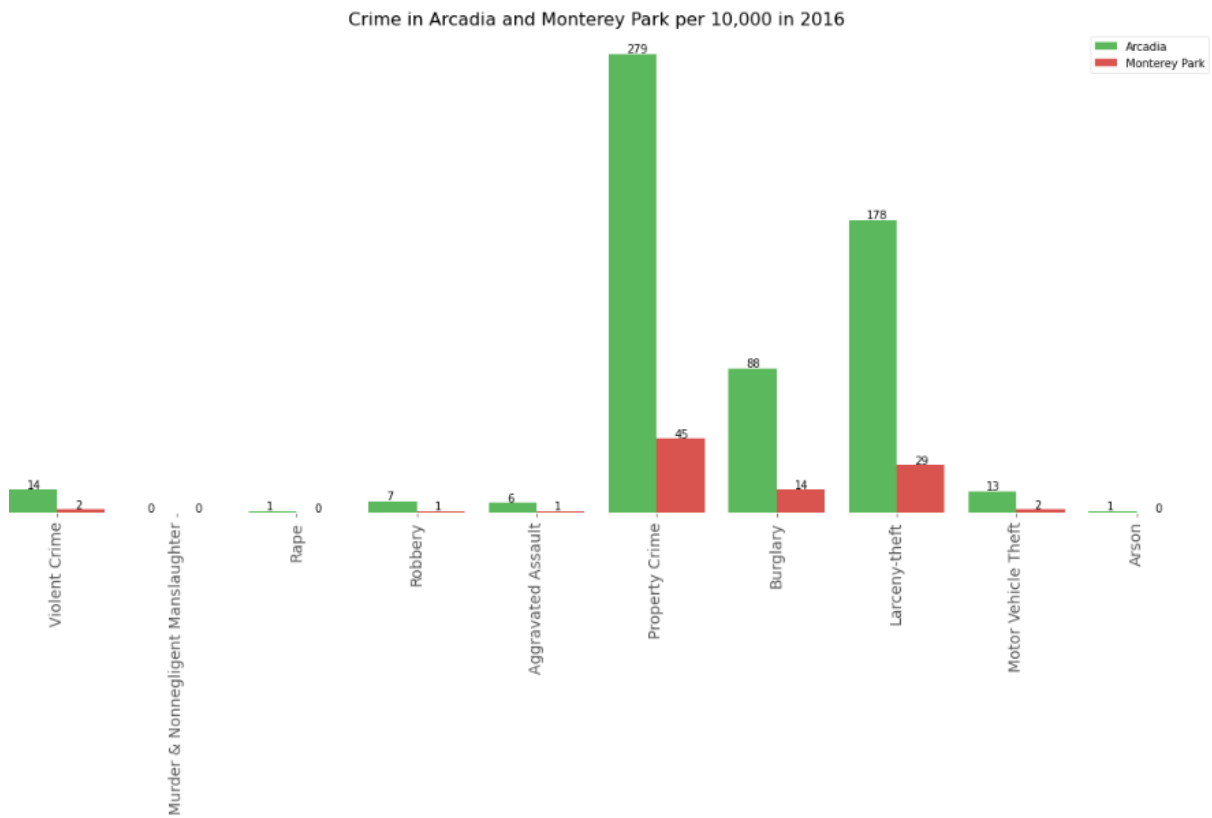


Figure 3.9: Incidents in Arcadia, CA and Monterey Park, CA per 10,000 residents in 2016

Discussion

Using Python and Foursquare, we are able to analyze the venues, school quality, and safety data of both Arcadia, CA and Monterey Park, CA. We created maps, tables, and bar plots for the developer to consider.

We see that both cities have a large variety of venues which any property developer is interested in. Although there is a little gap in quality schools between Arcadia, CA and Monterey Park, CA, with Arcadia Unified performs a little better as overall in comparison to other school districts, it seems both cities have a good quality public schools. If a developer cares about the vicinity of their property to a great public school and is interested to build their property in Monterey Park, CA, maybe a good area to consider is the area where the public high schools is served by Alhambra Unified since it has better performance than other schools districts which serve Monterey Park schools. Lastly, the crime rate in both cities seemed to be pretty similar, except in property crime, burglary, and larceny theft, Arcadia seemed to be have higher incidents than those in Monterey Park, CA. We think that one of the reason these incidents happened more often in Arcadia, CA is because Arcadia properties are considered more upscale than those in Monterey Park. Therefore, it attracts more thieves and burglars.

Conclusion

In summary, both Arcadia, CA and Monterey Park, CA are good locations to build an apartment. Both have plenty of venues, good schools and low crime rate in comparison to other cities in the United States [1]. These are the important aspects which a developer should consider when choosing to build an apartment in an area. There are two reasons why it is important: First, it can drive the value of their property up. Second, the large number of venues means that the properties can be sold or rented quickly so the developer won't lose additional cost for maintenance of empty property.

If a developer is interested to build an upscale apartment with good quality school, then they can choose to build in Arcadia, CA. To deal with the property crime, burglary, and larceny theft, they can install a good security system in the apartment complex or hire a security company. On the other, if they care about regular and not so upscale property which surrounded by variety of venues, they can build their property in Monterey Park, CA.

Bibliography

- [1] *2020 Best School Districts in the Los Angeles Area*. NICHE. July 30, 2020. URL: <https://www.niche.com/k12/search/best-school-districts/>.
- [2] Metro. *San Gabriel Valley*. Ed. by Metro. Metro. Aug. 5, 2020. URL: <https://www.metro.net/riding/guide/system-maps/>. 2020.