FINDING NEIGHBORHOODS TO LIVE IN NEW CITIES

New York ●——→ San Diego

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ABSTRACT

My imaginary client is moving from New York, NY to San Diego, CA for a job.

However, she's only lived in New York all her life and is having a hard time to decide which neighborhood in San Diego she should live in. She is interested in areas that meets the following criteria:

- Similar to her current neighborhood, Chelsea, Manhattan(venues and amenities as in her current residence)
- Have her preferred venue types
- Have at least 2bed+ houses(preferably 3bed+) that are affordable, her maximum budget is 1.5m
- Safe enough for her to be able to walk around alone whenever

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Introduction

BACKGROUND

According to American Moving Statistics, 32 million people in the US moved in 2018, that is 10.1% of the population of 319 million US residents. The reasons for moving cities varied from Wanting new or better home/apartment to new job/job transfer/other job related reasons. Also, Rober Half's survey shows that 62% of workers said they would relocate for a job.

When relocating, some people struggle to figure out which area they should look into, mainly because a lot of times they don't know much about the new city they're moving to. The basis of this project is to help people, who are relocating and don't know much about the city they're moving to, easily compare cities and recommend possible locations/neighborhoods that they might be interested in. It does this by exploring venue-based city-to-city similarity measures, clustering neighborhoods within a city, and looking at housing requirements and prices as well as crime rates.

In this project, I am going to use New York, NY and San Diego, CA as my two cities to demonstrate the methodology, which can then be used for any cities that people want to compare.

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Introduction

PROBLEM

My client does not know San Diego well, since she's lived in NY only all her life. She has some ideas of what she wants in her new neighbor, but cannot figure out which neighbors in San Diego would meet her preference. How does she choose her new neighborhood?

TARGET AUDIENCE

Obviously my client, who is relocating to San Diego and does not know much about the city nor the neighborhoods, is the target audience of this project. However, others who struggle to figure out which area they should look into, when relocating, may also be interested.

DATA REQUIREMENTS

- List of Manhattan neighborhoods with latitude and longitude
- List of San Diego neighborhoods with latitude and longitude
- Geodata for current residence in Manhattan, NY with venues established using Foursquare
- Geodata for Sandiego, CA with venues established using Foursquare
- Each neighborhood's housing prices in San Diego with location, number of beds and complemented with geodata via Nominatim
- Crime rate in San Diego by neighborhoods
- Crime types by Neighborhoods in San Diego

Data - Sources

US MOVING STATISTICS FOR 2019

This site provides the compiled data from the United States Census Bureau. We can see how many people in the US move each year, top 10 states people are moving to and moving from, the reasons for moving, etc. - 32 million people in the US moved in 2018, that is 10.1% of the population of 319 million US residents.

ROBERT HALF SURVEY

The online surveys developed by Robert Half and conducted by Independent research firms include responses from more than 2,800 US workers 18 years of age or older and employed in office environments and more than 2,800 senior managers at companies with 20 or more employees in 28 major US cities - 62% of workers said they would relocate for a job.

NYU NEW YORK CITY NEIGHBORHOOD NAMES

GeoJSON file that was created as a guide to New York City's neighborhoods that appear on the web resource, "New York: A City of Neighborhoods." This includes information on boroughs, neighborhoods, and location(latitudes & longitudes) of each neighborhood.

SAN DIEGO NEIGHBORHOODS SHAPES

GeoJSON file that provides an overview of the neighborhoods in Sandiego. This includes information on neighborhoods and location(latitudes & longitudes) of each neighborhood.

FOURSQUARE API

This collects information on venues in the selected neighborhoods.

ZILLOW MARKET REPORTS

GeoJSON file that provides an overview of the neighborhoods in Sandiego. This includes information on neighborhoods and location(latitudes & longitudes) of each neighborhood.

SANDIEGO.GOV CRIME STATISTICS AND MAPS

San Diego provides crimes by neighborhood, and I'm using 'January-August 2019 data'. This includes information on the type of crimes and neighborhood that the crimes occurred in.

Data - Sources

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Data Analysis

SECTIONS

1. Chlsea, Manhattan - Analyzation of Chelsea's venues
2. Find Potential neighborhoods that fits my client's criteria
3. Find similar neighborhoods to the potential neighborhood in San Diego
4. Explore & analyze neighborhoods by housing prices in San Diego
5. Explore & analyze neighborhoods by housing prices in San Diego

Chelsea, Manhattan - number of venues per category
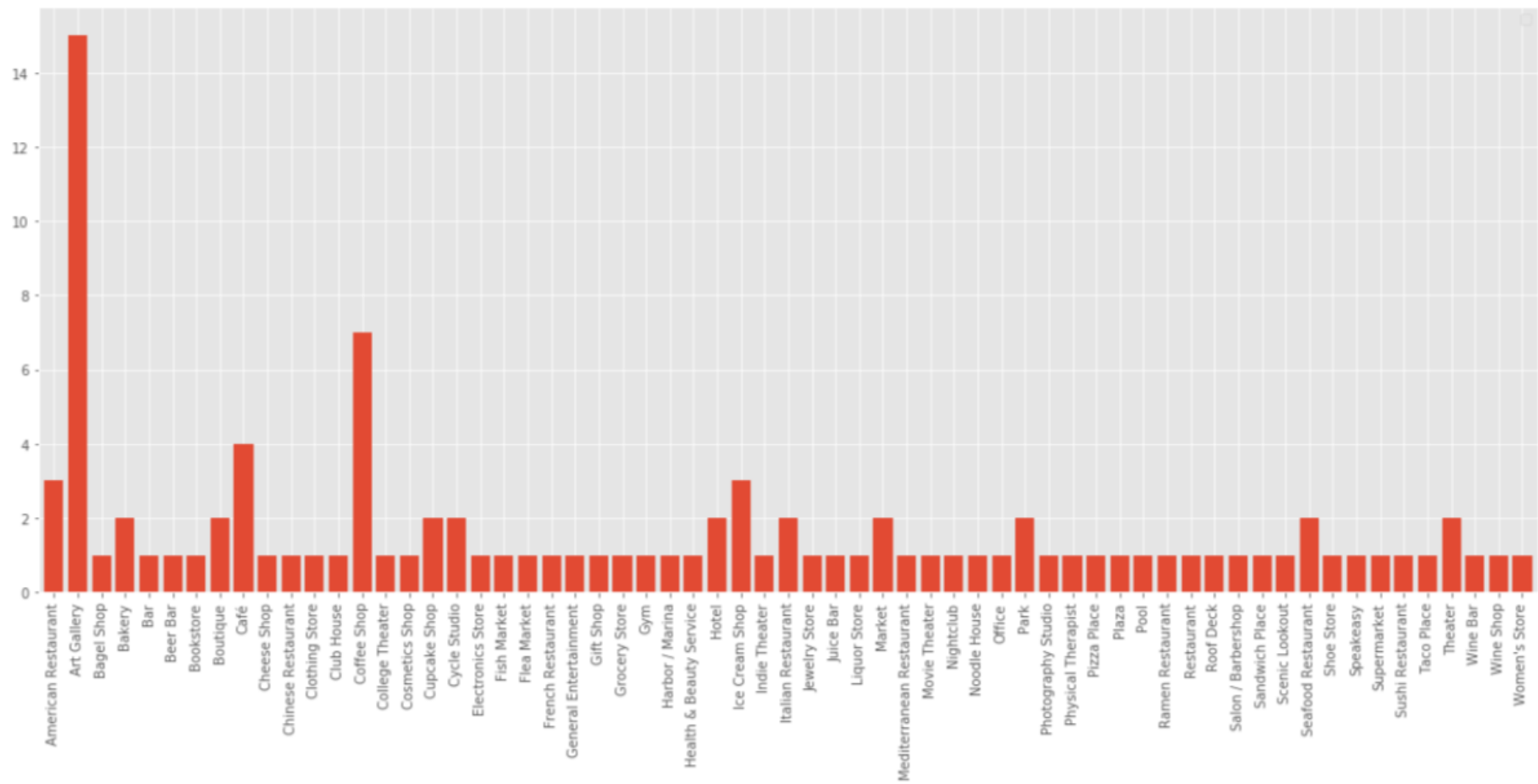
Chelsea, Manhattan

Chelsea's top 15 common venues are: Art Gallery, Coffee Shop, Cafe, Ice Cream Shop, American Restaurant, Cycle Studio, Seafood Restaurant, Market, Theater, Bakery, Boutique, Cupcake Shop, Hotel, Italian Restaurant, Park

Chelsea, Manhattan - top 10 most common venues

Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
Chelsea	Art Gallery	Coffee Shop	Café	Ice Cream Shop	American Restaurant	Cycle Studio	Seafood Restaurant	Market	Theater	Bakery

Find Potential neighborhoods that fits my client's criteria

SIMILARITY SCORE

San Diego neighborhoods that are similar to Chelsea, Manhattan by venues are: Gaslamp, North Park, Core-Columbia, Allied Gardens, Sunset Cliffs, Rancho Encantada, Ocean Crest, Horton Plaza, Little Italy, and Hillcrest.

10 most similar San Diego neighborhoods to Chelsea

36	Gaslamp	0.183030
70	North Park	0.193883
23	Core-Columbia	0.196038
1	Allied Gardens	0.196469
104	Sunset Cliffs	0.196469
85	Rancho Encantada	0.196469
73	Ocean Crest	0.196469
42	Horton Plaza	0.203715
52	Little Italy	0.210613
41	Hillcrest	0.214522

Client's preferred venue categories

Neighborhood	American Restaurant	Art Gallery	Bagel Shop	Bakery	Bar	Beer Bar	Bookstore	Boutique	Café	Cheese Shop	Chinese Restaurant	Clothing Store	Club House	Coffee Shop	College Theater	Co...
Adams North	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Allied Gardens	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Alta Vista	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Azalea/Hollywood Park	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Balboa Park	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0		0.0	0.0	0.0	1.0	0.0

Neighborhoods with most number of preferred venue categories

Gaslamp	29
Hillcrest	29
Little Italy	25
Core-Columbia	25
Horton Plaza	24
Harborview	24
Pacific Beach	21
North Park	21
Grantville	19
Marina	18

Find Potential neighborhoods that fits my client's criteria

PREFERRED VENUE CATEGORIES

Client's desired venues in her new neighborhood in San Diego:

American Restaurant, Art Gallery, Bagel Shop, Bakery, Bar, Beer bar, Bookstore, Boutique, Cafe, Cheese shop, Cupcake shop, Cycle Studio, Electronics store, Fish market, Flea market, French restaurant, General entertainment, Gift shop, Grocery store, Gym, Harbor/Marina, Health & Beauty service, hotel, Ice cream shop, Indie theater, Italian restaurant, Jewelry store, Juice bar, Liquor store, Market, Meditterranean restaurant, Movie theater, Nightclub, Noodle house, Office, Park, Photography studio, Physical therapist, Pizza place, Plaza, Pool, Ramen restaurant, Restaurant, Roof deck, Salon/Barbershop, Sandwich place, Scenic lookout, Seafood restaurant, Shoe store, Speakeasy, Supermarket, Sushi restaurant, Taco place, Theater, Wine bar, Wine shop, Women's store, Art museum, Bank, Climbing gym, Cocktail bar, Drugstore, English Restaurant, Flower shop, Frozen yogurt shop, Gas station, Gym/fitness center, Nail salon, Pet Service, Tiki bar, Automotive shop, Pharmacy.

Neighborhoods with most number of my client's preferred venue categories are: Gaslamp, Hillcrest, Little Italy, Core-Columbia, Horton Plaza, Harborview, Pacific Beach, North Park, Grantville, and Marina.

Gaslamp	29	0.183030
Hillcrest	29	0.214522
Little Italy	25	0.210613
Core-Columbia	25	0.196038
Horton Plaza	24	0.203715
North Park	21	0.193883

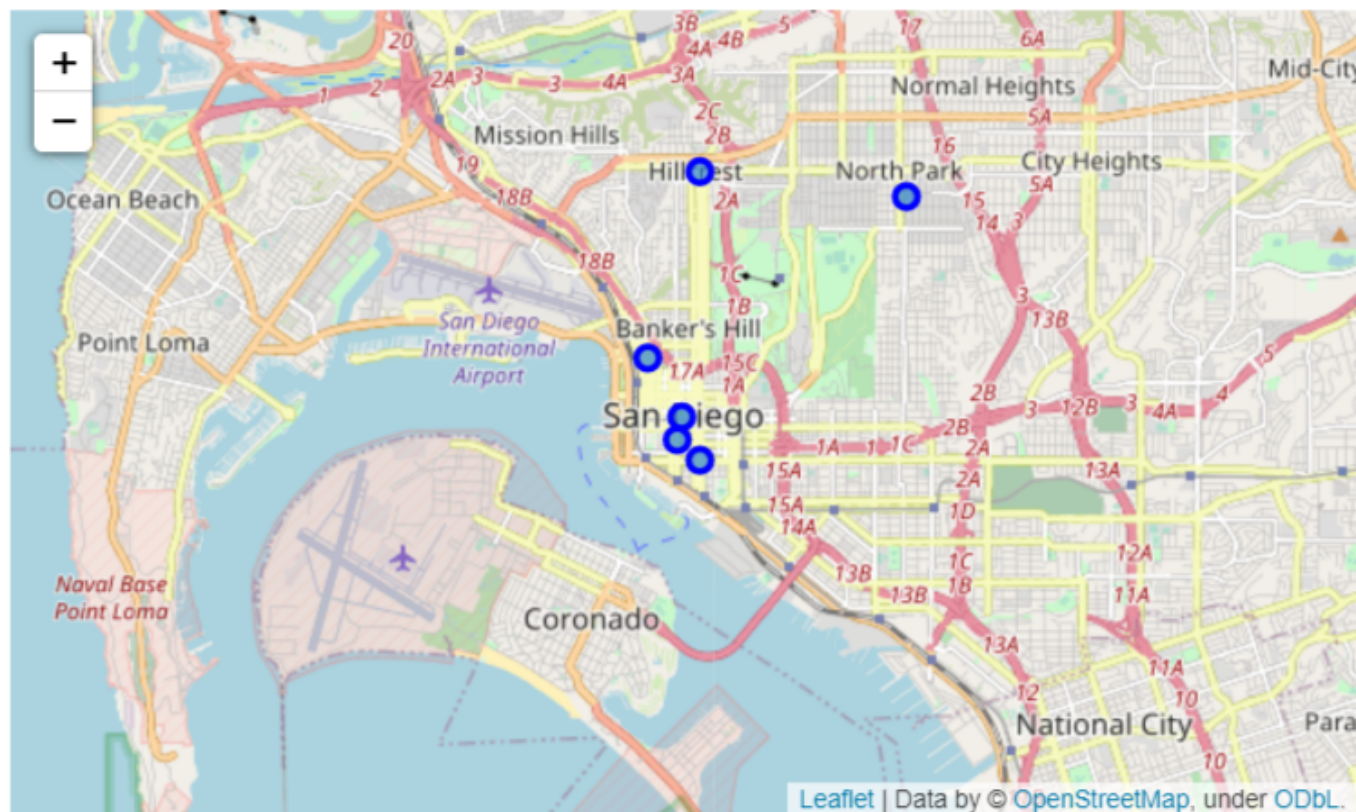# Find Potential neighborhoods that fits my client's criteria

POTENTIAL NEIGHBORHOODS

San Diego neighborhoods that are both most similar to Chlesea and have the most number of my client's desired venues are: Gaslamp, Hillcrest, Little Italy, Core-Columbia, Horton Plaza, and North Park.

Map of the potential neighborhoods

Map of clustered neighborhoods in San Diego

Find similar neighborhoods to the potential neighborhoods

There are two potential areas in San Diego that would be suitable for my client:

- The first neighborhood area includes Gaslamp, Horton Plaza, Little Italy and Core-Columbia. And neighborhoods that are similar to them in the area are - Morena, Sorrento Valley, South Park, Roseville/Fleet Ridge, Mission Valley East, East Village, Petco Park, Marina, Cortez and Harborview

- The second neighborhood area includes North Park and Hillcrest. And neighborhoods that are similar to them in the area are - Egger Highlands, Midtown, Grantville, Ocean Beach, Clairemont Mesa East, Teralta West, Rancho Bernardo, Burlingame, Rancho Penasquitos, Pacific Beach, Normal Heights, Barrio Logan, Point Loma Heights, University Heights, Kensington, Del Mar Heights, Grant Hill, Balboa Park, Fox Canyon, San Ysidro, Carmel Mountain, Park West, Golden Hill.
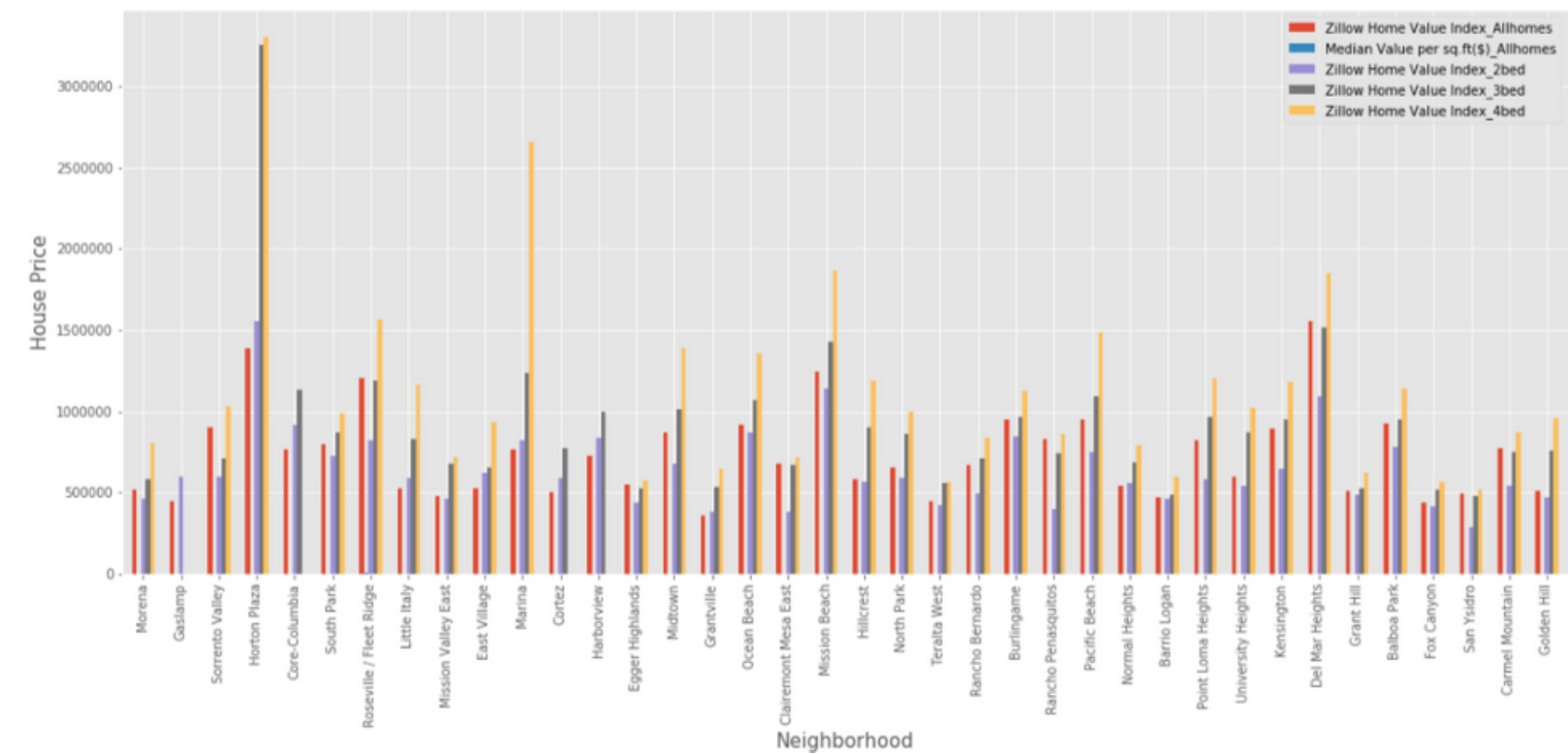
Explore & analyze neighborhoods by housing prices in San Diego

My client preferred 3 bedroom houses, which ranged from $428,900 to $3,252,700 and the data was skewed right. Also, the mean price of all 3 bedroom houses came around $773,032, meaning most 3 bedroom houses fell under my client's budget.

The budget is below $1.5m. And my client preferred 3 bedroom houses. Hence, Horton Plaza, Gaslamp, and Del Mar Heights were out of options, because Horton Plaza and Del Mar Heights 3 bedroom houses were over our budget and Gaslamp did not have 3 bedroom houses.

Based on the findings, out of our first option neighborhoods, only Hillcrest, Little Italy, Core-Columbia, and North Park were left for consideration.
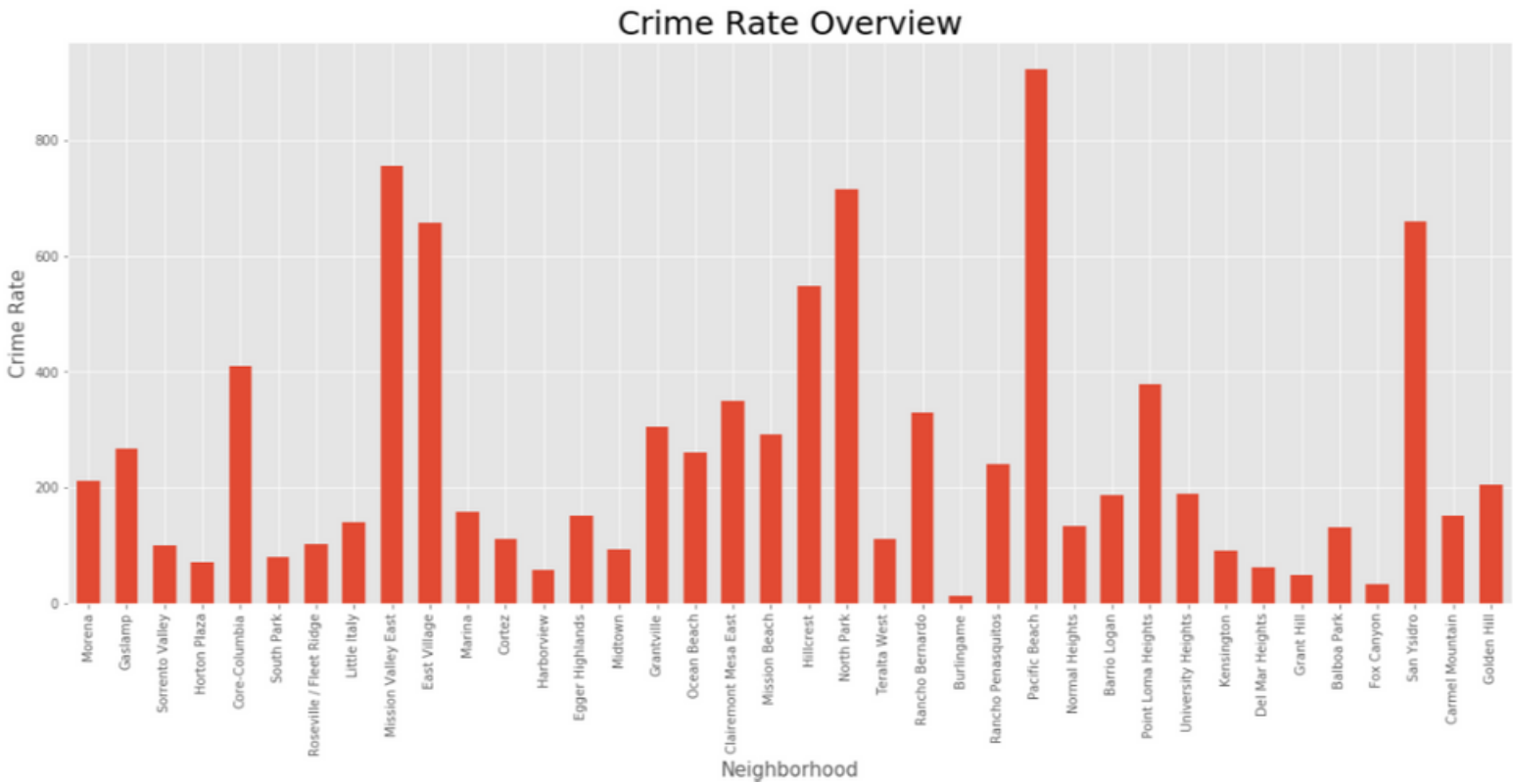
Housing price overview for extended potential neighborhoods

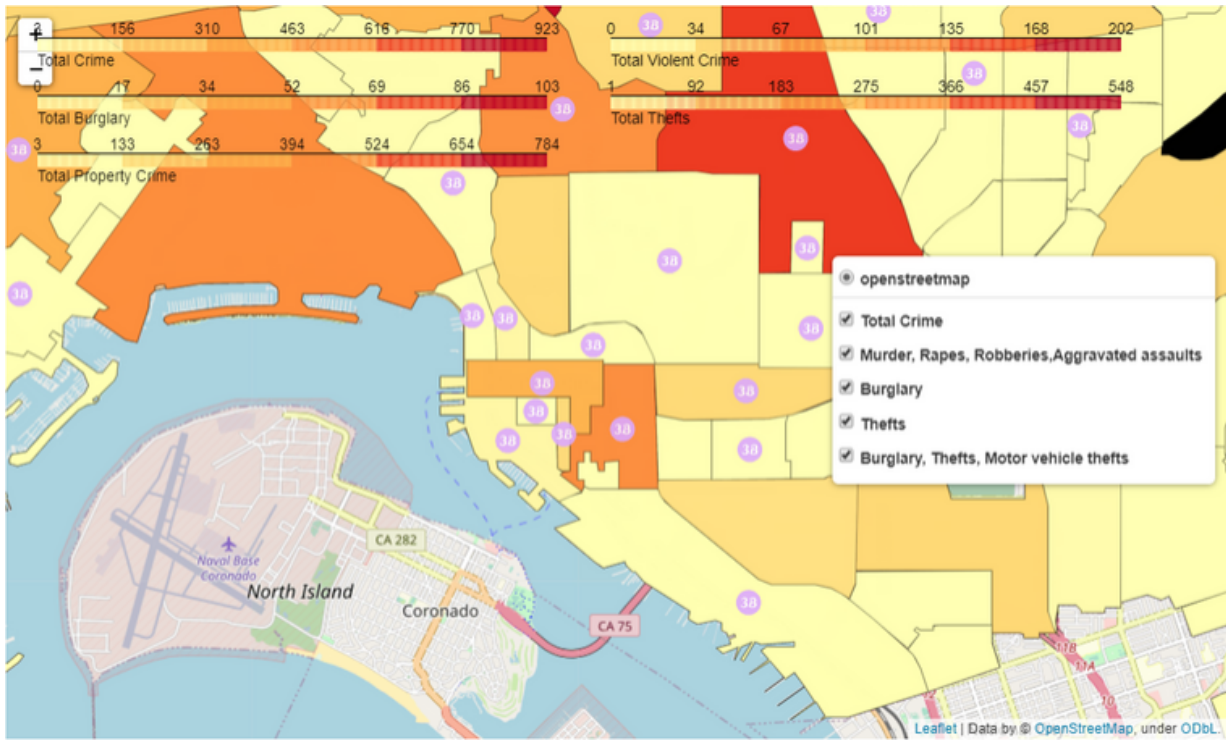## 3 bedroom price for extended potential neighborhoods

Crime Rate Overview

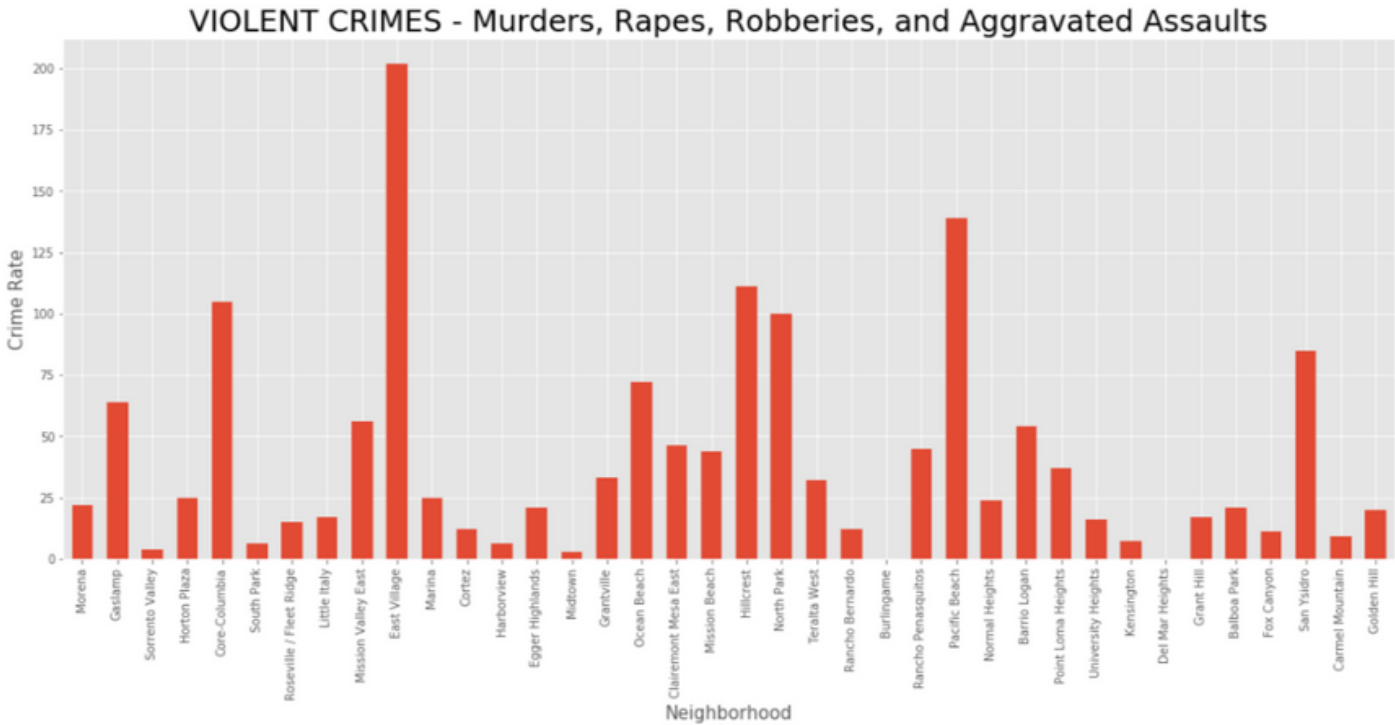Crime overview map with crime categories toggle
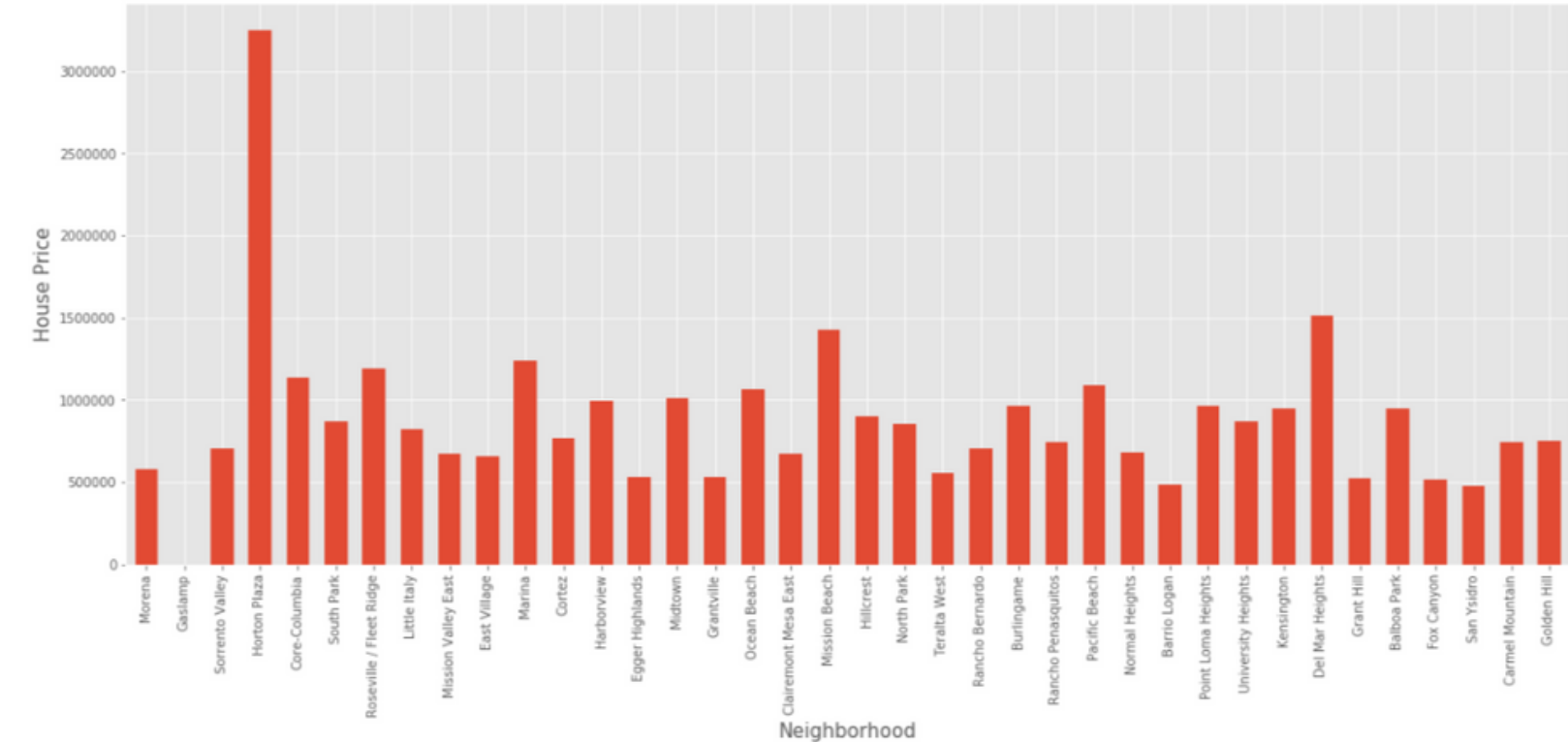
Explore & analyze neighborhoods by crime rate in San Diego

From the crime rate graphs, I'd eliminated following neighborhoods from consideration: Core-Columbia, Mission Valley East, East Village, Grantville, Ocean Beach, Clairemont Mesa East, Mission Beach, Hillcrest, North Park, Rancho Bernardo, Rancho Penasquitos, Pacific Beach, Point Loma Heights, San Ysidro. All these neighborhoods had 200 or more crimes between January - August 2019. That left us with: Morena, Sorrento Valley, South Park, Roseville / Fleet Ridge, Little Italy, Marina, Cortez, Harborview, Egger Highlands, Midtown, Teralta West, Burlingame, Normal Heights, Barrio Logan, University Heights, Kensington, Grant Hill, Balboa Park, Fox Canyon, Carmel Mountain, and Golden Hill.

Explore & analyze neighborhoods by crime rate in San Diego

VIOLENT CRIMES - Murders, Rapes, Robberies, and Aggravated Assaults

However, the following neighborhoods had close to and/or more than 25 violent crimes: Morena, Marina, Egger Highlands, Teralta West, Normal Heights, Barrio Logan, Balboa Park, and Golden Hill. Hence these could not fall under our consideration. Neighborhoods I could look at were now Sorrento Valley, South Park, Roseville / Fleet Ridge, Little Italy, Cortez, Harborview, Midtown, Burlingame, University Heights, Kensington, Grant Hill, Fox Canyon, and Carmel Mountain.

Then I looked at the Burglary data, and I eliminated Sorrento Valley, University Heights, and Carmel Mountain. All of the above left me with South Park, Roseville / Fleet Ridge, Little Italy, Cortez, Harborview, Midtown, Burlingame, Kensington, Grant Hill, and Fox Canyon. These also fell under 100 thefts between January - August 2019.

TOTAL BURGLARY - Residential & Non-residential
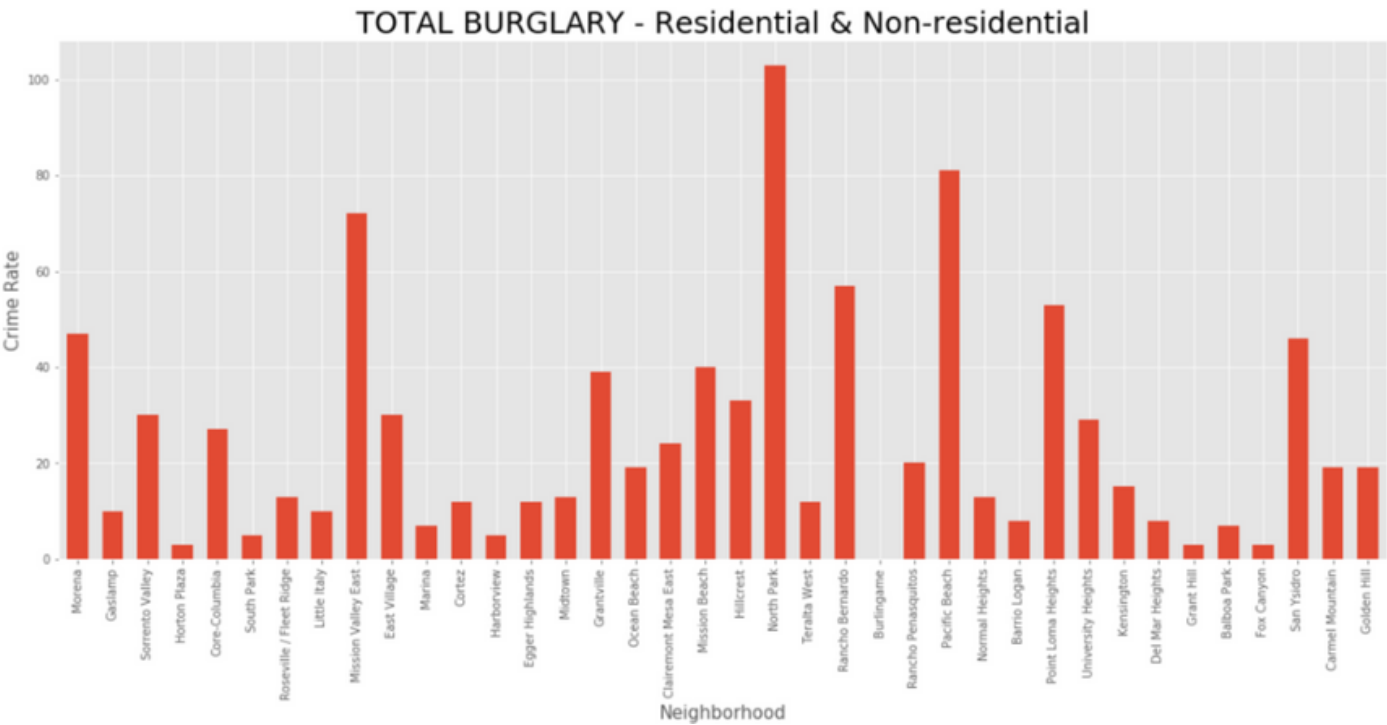
1ST CHOICE - LITTLE ITALY

- similarity score to Chelsea, Manhattan was 0.21, 3rd most similar.

- had 25 of the preferred venue categories, third most preferred venues, where Gaslamp and Hillcrest had the most preferred venues - 29.

- 10 Most common venues in Little Italy are: Italian restaurant, Wine bar, Coffee shop, American restaurant, Hotel, Cafe, Pizza place, New American restaurant, Japanese restaurant, Grocery store

- 3 bedroom houses cost around $824,500 and 4 bedroom houses cost around $1,165,100. So if my client wanted, she could get either 3 bedroom or 4 bedroom houses.

- Distance to Gaslamp, which is most similar to Chelsea and has most preferred venues - 1.4mi, 8min drive, 28min walk

2ND CHOICE - SOUTH PARK, ROSEVILLE/FLEET RIDGE, CORTEZ AND HARBORVIEW,

These neighborhoods fell in the same cluster as Little Italy, meaning they are similar to Little Italy.

- All of them have 3 bedroom houses and are under budget - South Park($867,600), Roseville/Fleet Ridge($1,190,500), Cortez($771,900), Harborview($992,400)

- However, both Cortez and Harborview don't have 4 bedroom houses and Roseville/Fleet Ridge's 4 bedroom houses are over $1.5m. So if my client would like to consider 4 bedroom houses as well, the only choice left would be South Park($987,700).

- 10 most common venues in South Park: Juice bar, Food truck, Italian restaurant, Cafe, Brewery, Breakfast spot, Flower shop, Bake shop, Coffee shop, Street food gathering

Discussion - 2nd Choice

- 10 most common venues in Roseville/Fleet Ridge: Sporting goods shop, coffee shop, American restaurant, Hotel, Hotel bar, Convenience store, Sushi restaurant, Ethiopian restaurant, Exhibit, Eye doctor

- 10 most common venues in Cortez: Park, Cafe, Coffee shop, Concert hall, Mexican restaurant, Taco place, Italian restaurant, Middle Eastern restaurant, Convenience store, Hotel

- 10 most common venues in Harborview: Boat or Ferry, Italian restaurant, Coffee shop, Wine bar, American restaurant, Pizza place, Rental car location, Hotel, Cafe, Japanese restaurant

- Distance to Gaslamp, which is most similar to Chelsea and has most preferred venues - South Park(2.6mi, 8min drive, 51min walk), Roseville/Fleet Ridge(5.6mi, 16min drive, 1h51min walk), Cortez(9mi, 5min drive, 18min walk), Harborview(1.7mi, 8min drive, 36min walk)

Discussion - 2nd Choice

3RD CHOICE - MIDTOWN, BURLINGAME, KENSINGTON, GRANT HILL AND FOX CANYON.

- Burlingame, Grant Hill and Fox Canyon are the safest neighborhoods

- 10 most common venues in Midtown: Rental car location, Pizza place, Pub, Gas station, Intersection, Lounge, Motorcycle shop, Pet service, Print shop, Whisky bar

- 10 most common venues in Burlingame: Pizza place, Mexican restaurant, Bar, Indian restaurant, Record shop, Coffee shop, Nail salon, Cafe, Bookstore, Gift shop

- 10 most common venues in Kensington: Coffee shop, Liquor store, Spa, Cafe, Pizza place, Burger joint, Pet store, Bar, Video store, French restaurant

- 10 most common venues in Grant Hill: Mexican restaurant, Indie theater, Pharmacy, Convenience store, Comfort food restaurant, discount store, Coffee shop, Park, Restaurant, Caribbean restaurant

- 10 most common venues in Fox Canyon: Pizza place, Asian restaurant, Taco place, Grocery store, Dive bar, Rental service, Chinese restaurant, motorcycle shop, food

- All of them have 3 bedroom houses and are under budget - Midtown($1,012,000), Burlingame($963,300), Kensington($945,800), Grant Hill($523,100) and Fox Canyon($517,500)

- All of them have 4 bedroom houses and are under budget - Midtown($1,386,400), Burlingame($1,121,900), Kensington($1,176,700), Grant Hill($620,100) and Fox Canyon($564,700)

- Distance to Gaslamp, which is most similar to Chelsea and has most preferred venues - Midtown(2.4mi, 8min drive, 54min walk), Burlingame(3.2mi, 10min drive, 1h2min walk), Kensington(6.5mi, 11min drive, 2h7min walk), Grant Hill(1.7mi, 6min drive, 34min walk) and Fox Canyon(5.7mi, 11min drive, 2h5min walk)

Discussion - 3rd Choice

CONCLUSIONS

In conclusion, my research and analysis show that my client would want to look at Little Italy as her next neighborhood to live in when she moves to San Diego.

In this project, I analyzed the neighborhoods in San Diego by venues, housing price, and crime rate, in order to provide my client with a list of neighborhoods that fit her criteria and she would be interested in looking.

My research consists of similarity scores between Chelsean, Manhattan and San Diego neighborhoods, the number of preferred venue categories that each neighborhood in San Diego has, 10 most common venue categories for every neighborhood in San Diego, map of San Diego with neighborhood locations, and housing prices and crime data per category for every neighborhood in San Diego. Overall, my research showed all the data she wanted and would want about San Diego neighborhoods.

My analysis summarizes the research I carried and makes it easy for my client to look and understand the data, and decide where to live, even though she doesn't know San Diego very well.