

The background features abstract, overlapping green geometric shapes in various shades of green, creating a modern and dynamic feel. The shapes are primarily located on the left and right sides of the slide, framing the central text.

Capstone Project

finding the location of new gym in L.A

Gym investment

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Business Introduction

- ▶ The city of Los Angeles and its neighborhood are the home of eleven top level professional sports teams from different leagues like NBA, NHL, MLS and WNBA.
- ▶ Sport industry is popular in this area so it can be seen how competitive this industry is here
- ▶ Gym is the common place that everyone can use and can be found everywhere in cities.
- ▶ To invest new gym in a place, we should consider the location first. Good place decides the basis of cash flow or income of enterprise
- Target
People who want to run a gym business in L.A area and figure out what location would have low competition and enough population

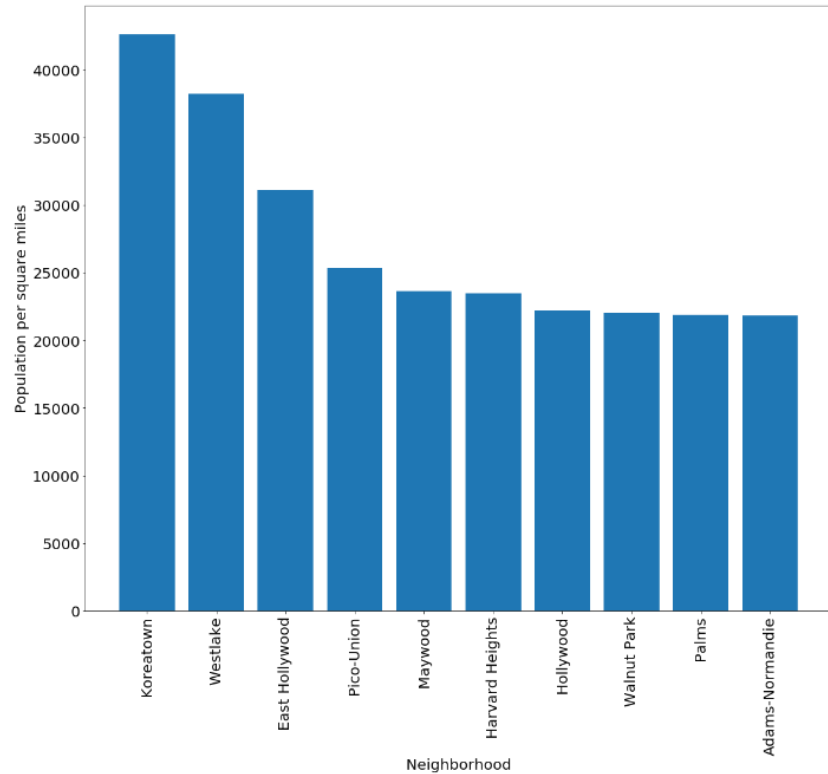
Data Overview

- ▶ Data mainly come from two sources which are made by L.A. times and foursquare:
- ▶ [Neighborhood geospatial data](#) and [population data](#) can be found in its website
- ▶ The last [data](#) is from foursquare website which has various of venues data. But it need to sign up an account to retrieve the data from the website.

	Neighborhood	Latitude	Longitude
0	Acton	34.49548	-118.172
1	Adams-Normandie	34.03226	-118.302
2	Agoura Hills	34.14012	-118.744
3	Agua Dulce	34.49395	-118.309
4	Alhambra	34.08308	-118.136

	Rank	Neighborhood	Population per Sqmi
0	1	Koreatown	42611
1	2	Westlake	38214
2	3	East Hollywood	31095
3	4	Pico-Union	25352
4	5	Maywood	23638

Exploratory analysis



Ranking of population in neighborhood

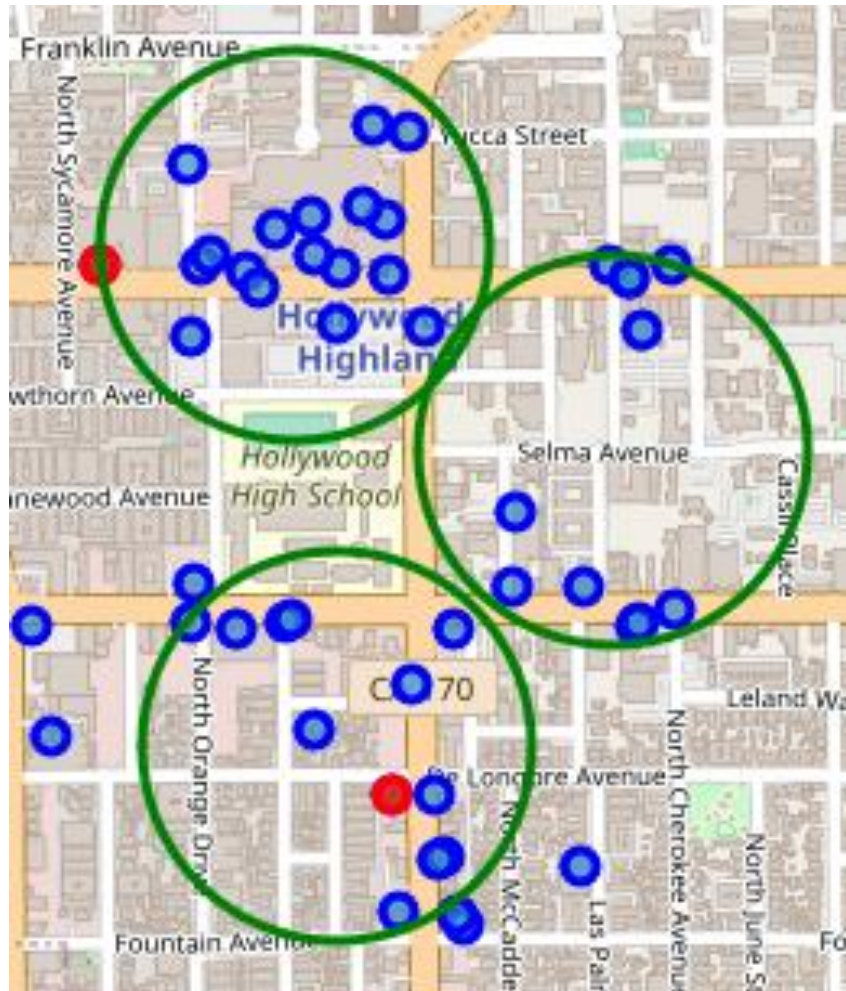


Neighborhood visualization

Some filtering criteria is used:

- Population is higher than 15000 person per square miles
- At least one gym in this area
- Gym is not included in Top 10 most common venues

Modeling



- Kmeans method is used
- Based on the limit number of foursquare data, the data can be used is also limited.
- Hollywood is the only place fit the filtering criteria
- Distribution shows three clusters on the map
- Only one place doesn't contain any gym or yogurt studio
- The potential place could be northwestern of Selma Avenue

Conclusion and future direction

- ▶ The possible neighborhood followed by the filtering rule is only Hollywood
- ▶ The potential area could be investigated further is Selma Avenue
- ▶ Future direction includes:
 - ▶ Average wage in neighborhood
 - ▶ Average age in neighborhood