



Denver, CO

Where is the ideal place
to open a new Jiu Jitsu
School?

Jiu Jitsu

- When trying to find the optimal location to open a Jit-Jitsu school, you want to look for three factors: 1. no nearby Jiu Jitsu competition within at least a 5-mile radius. 2. Make sure there aren't other similar venues nearby, i.e., Mixed martial arts school, boxing, judo, etc.. and 3. what your preferred surrounding neighborhoods real estate value averages (targeted income status).
- We will use our data science powers to generate promising neighborhoods based on these criteria. Each area's advantages will then be clearly expressed so that stakeholders can choose the best possible final location.



Data Contents

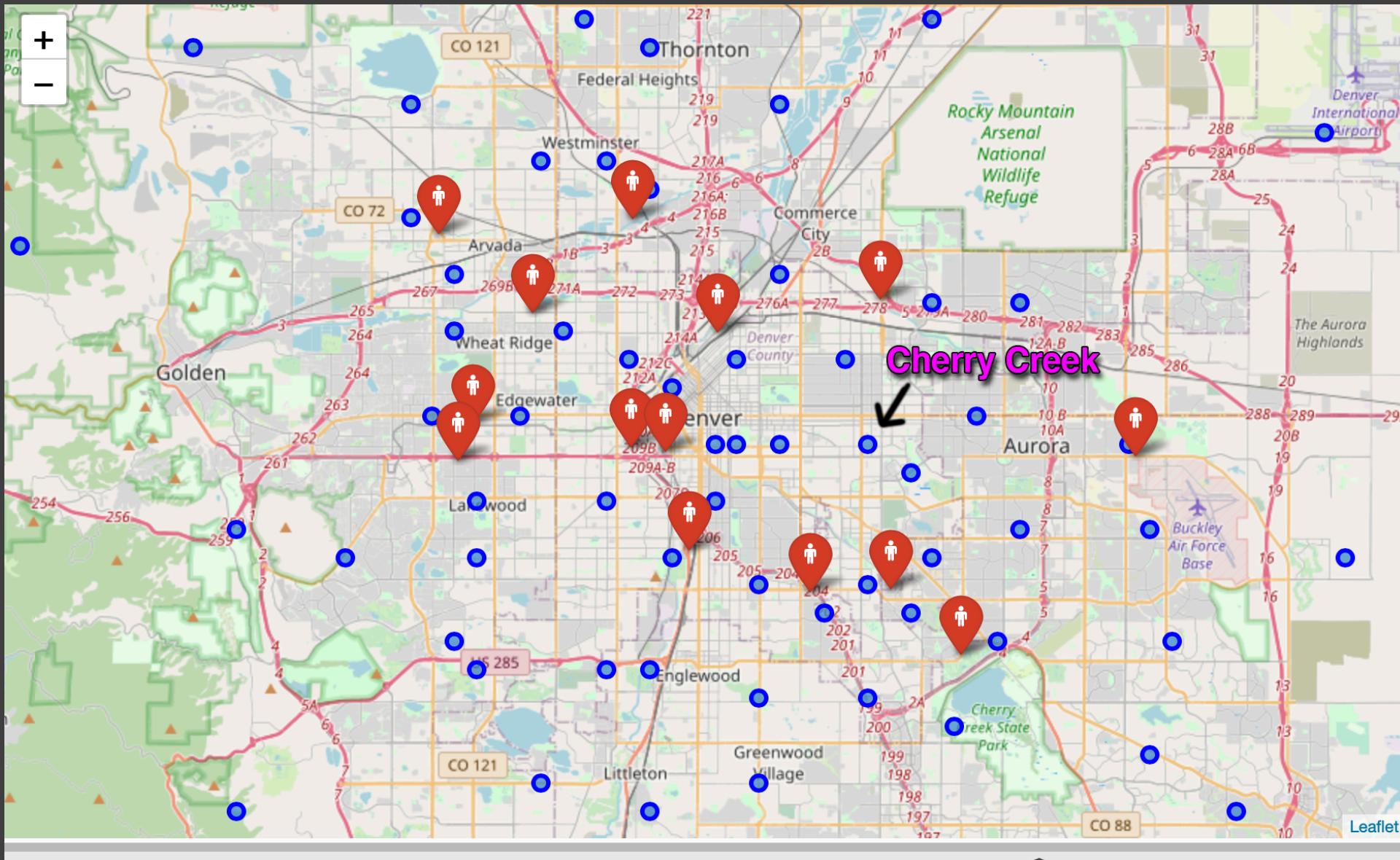
Based on definition of our problem, factors that will influence our decision are:

- number of existing Jiu-Jitsu schools in the neighborhood (any type of martial arts school)
- number of and distance to any type of martial arts schools in the neighborhood, if any
- real estate value

Following data sources will be needed to extract/generate the required information:

- ✓ Find data that has list of Denver neighborhoods and zip codes, google, **Denverpost had downloadable csv, therefore did not have to use BeautifulSoup.**
- ✓ Change Zipcodes to Coordinates using **USzipcodes and SearchEngine**
- ✓ Find existing Jiu-Jitsu schools, and neighborhood locations in Denver City using **Google Places API reverse geocoding**
- ✓ Number of popular venues and location in every neighborhood will be obtained using **Foursquare API**
- ✓ Coordinates of Denver, CO center will be obtained using **Google Maps API geocoding** of well-known Denver, CO location (Colorado Department of the Treasury)

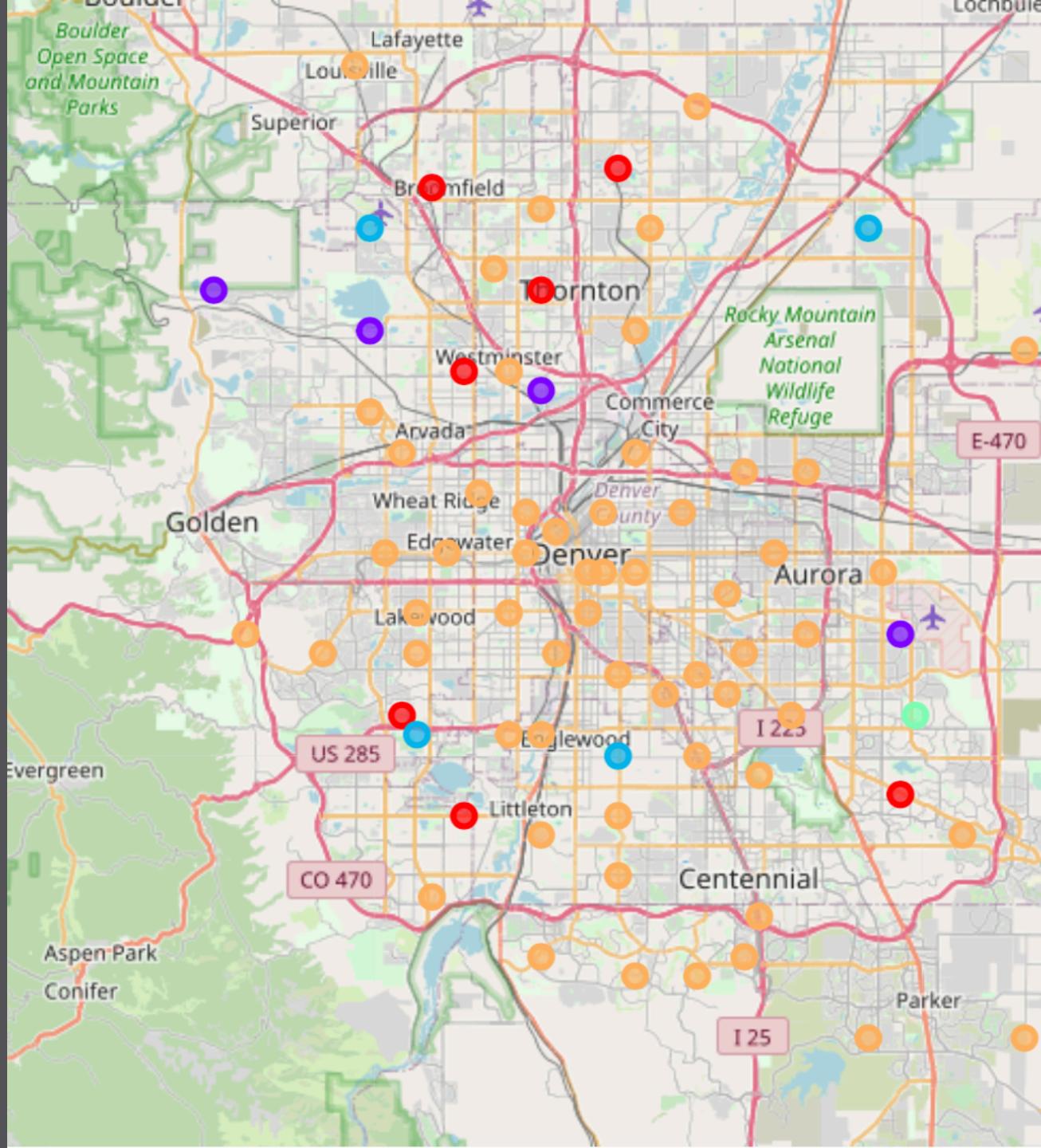
Map of current Jiu-Jitsu schools aligned with neighborhoods



Cluster Neighborhoods

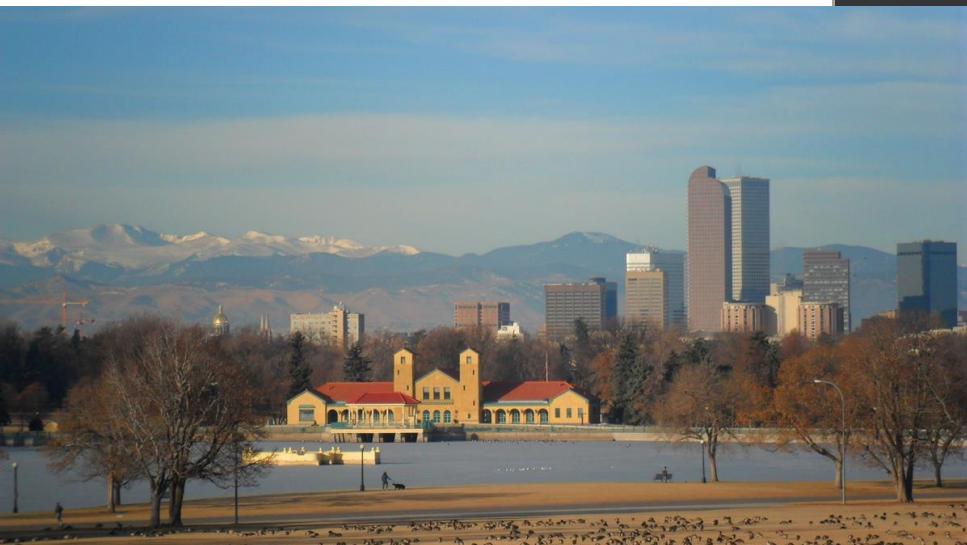
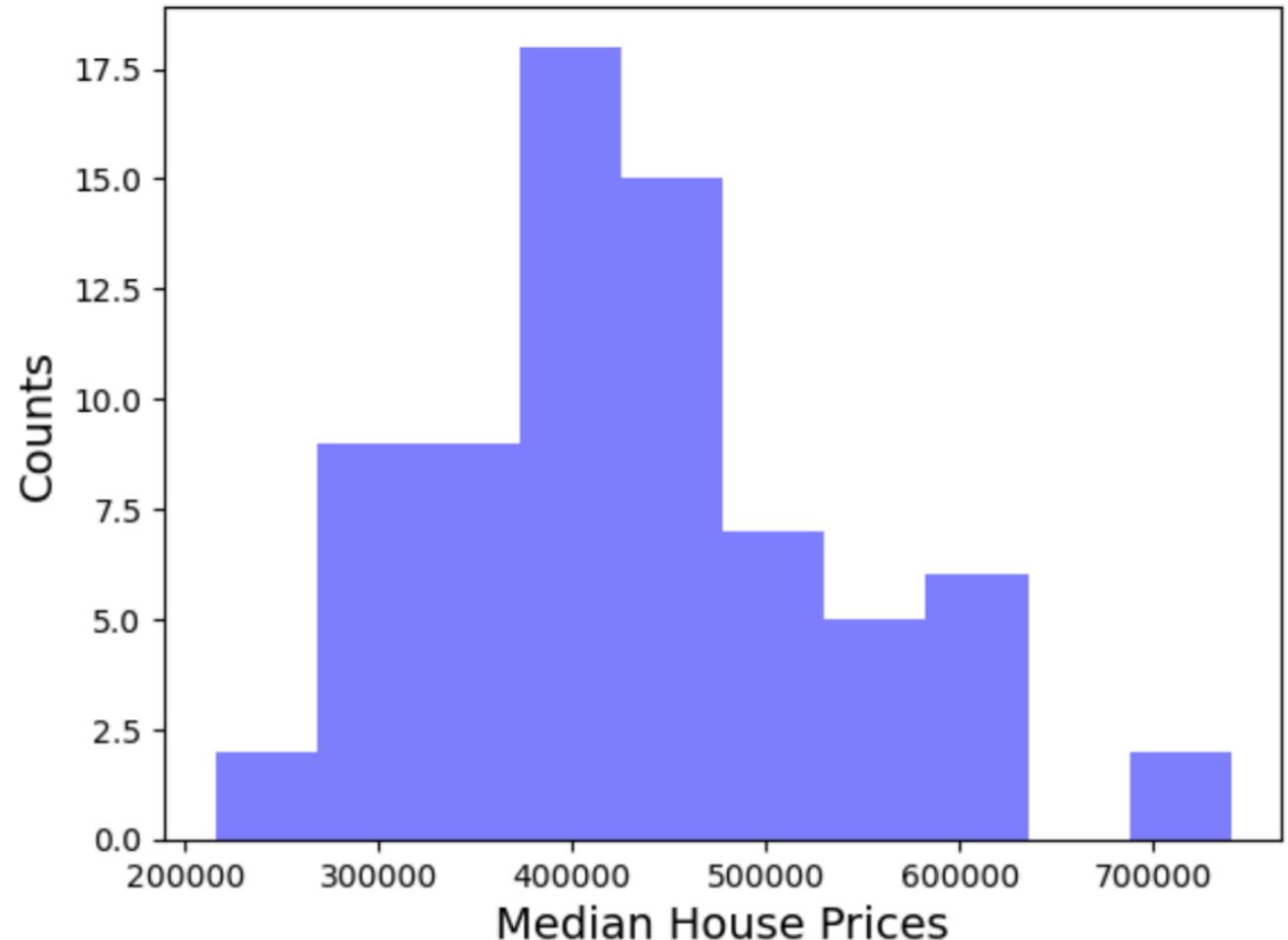
Using $k = 5$

- Cluster 1 = Financial/Legal Service
- Cluster 2 = Farmers Markets
- Cluster 3 = Fast food
- Cluster 4 = Fishing Spot
- Cluster 5 = Food



k -means to cluster the neighborhood into 5 clusters

Median House Price in Range



House median prices



Conclusions and Future Directions

- For this project, I was able to find a few potential neighborhoods in Denver, CO to open a Jiu-Jitsu school.
- If you decide to look at "rich" neighborhoods, no current Jiu Jitsu or similar venues near by, then Cherry Creek, Congress Park & City Park are the ideal candidates for this project.
- Foursquare only provides 50 top venues, therefore I should have narrowed my search to only include Gym/ Fitness venue category venues. (However, when running this, foursquare spit back 0 results. Thus, this section needs to be optimized.)
- Demographics is also a data value that would be useful for this project.