Where do I move into in Seattle?

# Introduction to the Problem

I recently visited Seattle, and I enjoyed my time there. I was researching what it would take to move there, and I came across the idea for my Capstone project.

For people moving to Seattle, how can we find a good neighborhood to move into?

This question can be answered in a myriad of ways, but I am trying to answer it by clustering 12 of the best neighborhoods in Seattle based on the frequency of different venues at their locations.

I will try to find neighborhoods that have a unique list of venues and are affordable compared to other neighborhoods in the list. Using k-means clustering and increasing the number of clusters, I can find neighborhoods that have similar kinds of venues in the Foursquare database.

## Project Audience

This project will help people who are deciding to move to Seattle, who will be the target audience. It will help them decide a neighborhood to look for apartments in, at an affordable rate.

## Expected Result

Usually there is wiggle room with respect to the amount of rent a person is willing to pay, so the result of this project is to get a visual representation of the data that helps make an informed choice.

# Data

I will be considering 12 neighborhoods, the average rent at these places, and the uniqueness of venues in a 500-meter radius of each neighborhood’s location.

Some of the data will be obtained by web scraping the following website:

https://www.seattlemet.com/home-and-real-estate/2019/03/the-top-12-neighborhoods-in-seattle-

2019-edition

The data obtained will be the neighborhood name and the Average Rent in USD, as shown in

the screenshot below:

![Text, letter

Description automatically generated]()

After web scraping, the data will be stored as a .csv file, a screenshot of which is shown below:

Table

Description automatically generated

Data obtained using the Foursquare API will also be used for the project. Foursquare data will be queried using the API to get a list of venues, and the categories in which those venues lie.

A sample of the data in .csv format is shown below:

Graphical user interface, text

Description automatically generated with medium confidence

# Methodology

K-means clustering, sorting rent to find out neighborhoods that are not too expensive and have unique/interesting venues.

# Results

# Conclusion

* Introduction where you discuss the business problem and who would be interested in this project.
* Data where you describe the data that will be used to solve the problem and the source of the data.
* Methodology section which represents the main component of the report where you discuss and describe any exploratory data analysis that you did, any inferential statistical testing that you performed, if any, and what machine learnings were used and why.
* Results section where you discuss the results.
* Discussion section where you discuss any observations you noted and any recommendations you can make based on the results.
* Conclusion section where you conclude the report.