1. Description of the problem and discussion of the background.

1.1 Background:

A company who specializes in relocation assistance for executive level managers in the Seattle area wants to share information about dog friendly neighborhoods in the city. A dog friendly neighborhood should consist of Pet Stores, Veterinarians, Dog Parks and Pet Services. The purpose of this project is to identify which neighborhoods in Seattle make for the best dog friendly places to relocate.

1.2 Business Problem:

A company that specializes in relocation assistance wants information about neighborhoods in the Seattle area with Pet Stores, Veterinarians, Dog Parks and Pet Services. Current information about dog friendly neighborhoods in the Seattle area does not exist with these attributes. This company wants to provide dog owners with a more holistic view of dog friendly cities starting with Seattle.

1.3 Justification:

It is important to provide reliable information to help people with relocation questions and concerns. A major concern for a dog owner that is relocating to a city is the safety and care of their furry friend. Information about which neighborhoods are dog friendly can save time and reduce the stress of having to relocate.

1.4 Interest:

Relocation assistance companies would be interested in this project because it provides valuable information about dog friendly neighborhoods which are import to people with dogs. This information can differentiate the competition and increase customer satisfaction for relocation assistance companies. Dog companies would find this project of interest as well because they could use it to identify dog friendly neighborhoods to promote their products and services.

2. Description of the data and how it will be used to solve the problem.

2.1 Description:

The location data for the neighborhoods for this project comes from Wikipedia which contains a table that consist of 127 neighborhoods in the city of Seattle. HTML data from the Wikipedia page will be used to create the neighborhood table. The geospatial data for the latitude and longitude of the neighborhoods will come from the geopy python library or a CSV file. The location data for Pet Stores, Veterinarians, Dog Parks and Pet Services will come from Four Square.

2.2 Use:

The list of neighborhoods for Seattle, Washington will be scraped from the Wikipedia page listed under data sources using python libraries which will include the use of Beautiful Soup to parse the HTML into a Pandas dataframe. Information and location data about Pet Stores, Veterinarians, Dog Parks and Pet Services will come from Four Square and be used to cluster these attributes according to the approximate radius by distance from each other. An ideal dog friendly neighborhood would have all four of are attributes which are Pet Stores, Veterinarians, Dog Parks and Pet Services within a k-means cluster in a neighborhood in Seattle. A list of the top 10 neighborhoods will be identified from the greatest number of attributes to

lowest to provide a holistic view using folium to create a map visualization. Matplotlib python library will be used to create graphs to show quantity of attributes for each of the top 10 neighborhoods.

2.3 Data Sources:

https://en.wikipedia.org/wiki/List_of_neighborhoods_in_Seattle#cite_note-44