Choosing a location for a pet care center in NYC

Capstone Project - IBM Data Science Professional Certificate

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Introduction

For many of us, our pets are family members. We try to provide them with the best possible care, including food, toys, walks, grooming, vet check-ups and much more. And if you live in a big city, you prefer to have all your pet supplies and facilities nearby.

Our hypothetical client, The Pet Company, is planning to open their first pet care center in New York, and they need help in choosing the right neighborhood for that. As a data scientist, I will conduct analysis using methods learned throughout the course and offer my insights and recommendations to the business owner.

Data

To complete this project, we will essentially need three data sources:

1) **New York neighborhoods' geodata**

   New York has a total of 5 boroughs and 306 neighborhoods. In order to segment the neighborhoods and explore them, we will essentially need a dataset that contains the 5 boroughs and the neighborhoods that exist in each borough as well as the the latitude and longitude coordinates of each neighborhood. Luckily, this dataset exists for free on the web: https://geo.nyu.edu/catalog/nyu_2451_34572

2) **Data about pets living in New York, by neighborhood**

   In the US, all pet owners are obliged to register and license their pets. That's good for us because this data is also made available by the government on the web:

   https://data.cityofnewyork.us/Health/NYC-Dog-Licensing-Dataset/nu7n-tubp

3) **Data about existing pet venues**

To get an idea about existing pet venues in NYC and to analyze their density by neighborhood, we will use the Foursquare API.

Methodology

- *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, and what machine learnings were used and why.*

Results

Discussion

- *Discussion section where you discuss any observations you noted and any recommendations you can make based on the results.*

Conclusion