The battle of Neighborhoods

NEIGHBORHOOD
VETERINARY CARE

Introduction

New York is a big city, is the financial capital of USA and the most populous city. It is diverse and multicultural with a lot of kind of business for any segment

Problem Description

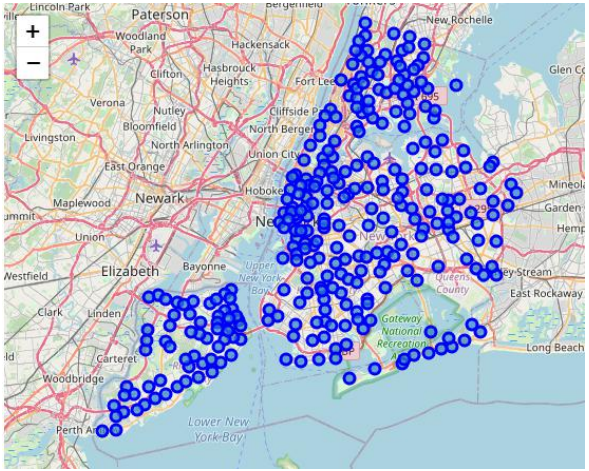
A vet is a business which who protects the health and well-being of both animals. They diagnose and control animal diseases and treat sick and injured animals. The City of New York have many people who lives with pets and need to have close to his house a vet in any case

New York city Facts

Neighborhood 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

Data description

We load the data and explore it and transform the data with pandas dataframe. This data will be use to get venues data from Foursquare using their API. Finally we used geopy and folium libraries for creating a map of the city with neighborhoods on top.



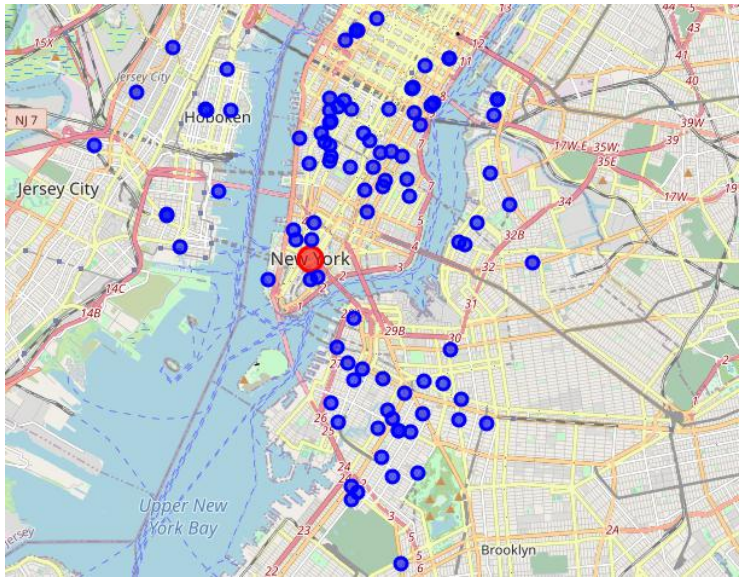
Data description

To analyze population, we scrapped the data from Wikipedia pages, we used BeautifulSoup Python library, this library help us to parser html to xml

	Borough	County	Estimate_2019	square_miles	square_km	persons_sq_mi	persons_sq_km
0	The Bronx	Bronx	1,418,207	42.10	109.04	33,867	13,006
1	Brooklyn	Kings	2,559,903	70.82	183.42	36,147	13,957
2	Manhattan	New York	1,628,706	22.83	59.13	71,341	27,544
3	Queens	Queens	2,253,858	108.53	281.09	20,767	8,018
4	Staten Island	Richmond	476,143	58.37	151.18	8,157	3,150
5		City of New York	8,336,817	842.343			783.83
6		State of New York	19,453,561	1,731.910			122,284

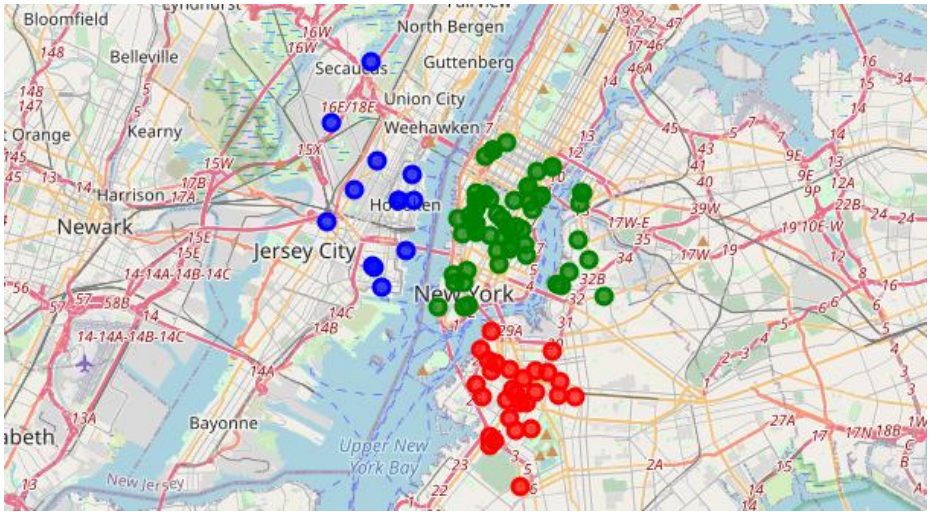
Data description

New York city geographical coordinates data will be utilized as input for the Foursquare API, that will be leveraged to provision veterinarians in the city. We will use the Foursquare API to explore neighborhoods in New York City



Results

From this venues data we filtered and used only veterinarians for New York clustering.
Neighborhoods K-Means clustering based on mean occurrence of veterinarian category, we can see the cluster created by using K-Means for New York.



Conclusion

There are a few veterinarians in some places of New York then could be a low risk to start a new business like that.