COURSERA CAPSTONE PROJECT

IBM Applied Data Science Capstone

Opening a new business near Tesla Superchargers!

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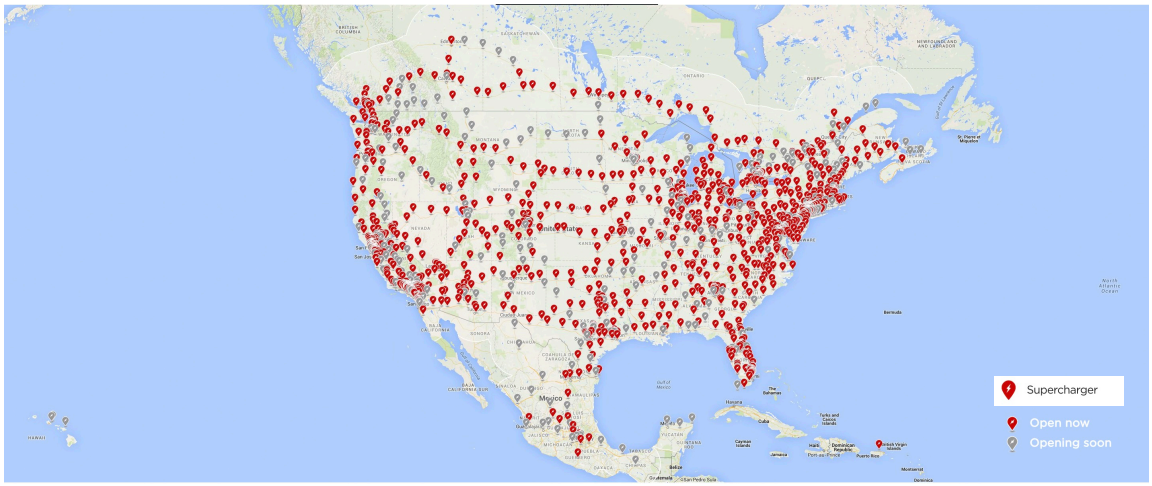
Problem

According to tesla.com/supercharger there are 1971 supercharges spread across USA where Tesla car owners can charge their cars at costs less than gasoline. The average wait times for the Tesla cars to charge varies from 15-40 mins. So the owners often hangout at restaurants or food courts that are nearby resulting in good turnout for these businesses.



But if you are a business owner its really hard for you to predict what kind of restaurant you should open near a supercharger as most of the superchargers are conveniently located inside a mall or near a super store complex. Without this insight you may end up opening a restaurant of a similar cuisine to the one that already exists and your business may not get that much attraction.

Data

Data Required

To analyze and help you with a right suggestion, we need the following datasets:

❖ Location and neighborhood of each Tesla Supercharger location in US

❖ Nearby food courts and restaurant within walking distance of the Tesla Superchargers

Data Sources

✤ supercharge.info keeps track of all the Tesla superchargers within United States along with the longitude and latitude of each location.

✤ Foursquare Api for venue information

Methodology

✤ Web scraping to extract the data from supercharge.info website. The data is available in json format. We need to scrape it out, filter out the superchargers only available within USA

✤ Use Foursquare Api to get venue data and nearby existing restaurants

✤ Group data by each supercharger and the types of restaurants based on cuisine

✤ Perform clustering on the data using the k-means clustering

✤ Visualize the clusters using Folium maps