Clustering and exploring Venues in the Jersey City Neighborhoods

Introduction

The project aims to identify venues and affordable housing in Jersey City neighborhoods to find out the suitable areas to live in Jersey City. We will also explore and rate the restaurants in the Jersey City districts based on the number of likes acquired by them to narrow down the options to have excellent quality food nearby. In this notebook, venues and number of likes will be procured in the Jersey City, using Foursquare API. At the same time, house affordability information will be obtained from the government website to help people distinguish between the districts' house affordability and explore the best restaurants of their liking.

Whenever people decide to settle down in a new city, they start looking for affordable places to live and venues to hang out. Among the venues, restaurants usually make it to the top of the list. One primarily looks for best places to have regular meals around their neighborhood; hence we will explore only staple food restaurants.

Overall, we'll identify appropriate areas in Jersey City for people to live based on the information collected from the Foursquare API, government-based data, using a machine learning algorithm, and exploratory analysis. Once we have the plot with the venues and affordable housing in each district, developers will be able to launch an application using the same data and suggest users such information.

Data

Data with Jersey City neighborhood and district locations in the form of shape and Geojson files are obtained from Jersey City Open Data platform (Jersey city government website link).
Foursquare API is used to fetch 100 venues within 800 meters of Jersey City neighborhoods. The Foursquare Places API provides location-based experiences with diverse information about venues, users, photos, and check-ins. The API supports real-time access to places. It allows developers to build audience segments for analysis and measurement, and JSON is the preferred response format.
House affordability of districts is determined based on the availability of the number of affordable housing units in each district, which is also obtained from the Jersey City Open Data platform (Jersey city government website link).