SEGMENTATION OF RESTAURANTS

by
Median Household Income
in Metro Vancouver

Background

- Objective: Find segmentation of restaurants and effect of income levels
- Location: Metro Vancouver
- Reasons for this location:
 - Highly diverse urban
 - Wide range of income level
 - World-famous food collection

Data Source

- 2016 Census Profile from Statistics Canada
- Geolocation Services API
- Foursquare API

Methodology

- Python Jupyter Notebook
 - Pandas
 - Requests
 - Sklearn
 - Etc.

Data Process Pipeline

Read CSV and import Read CSV and import Query the Geolocation Join the income and median household Metro Vancouver Service and get **FSA** coordinates income from 2016 **FSAs** coordinates Canada Census

Visualize the results

in Folium

Run the sklearn's

KMeans algorirhtm

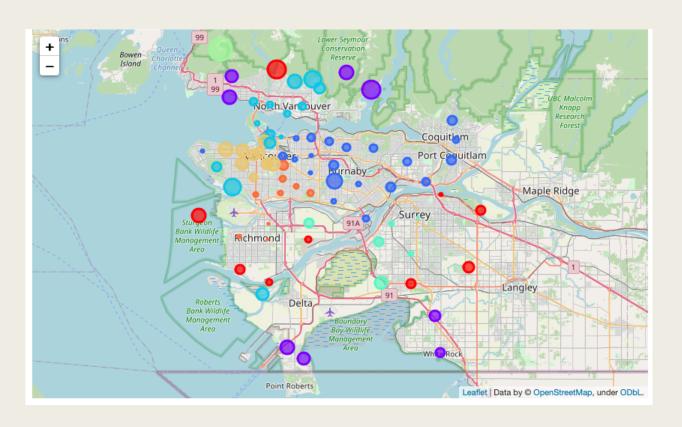
datasets

Normalize the income

and prepare for

KMeans Clustering

Results



Color: Clusters based on common restaurants

Size: Median Household Income

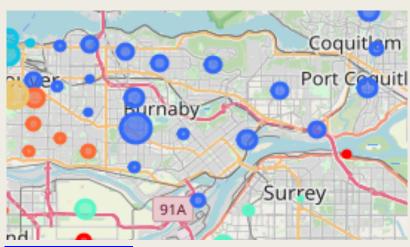
Example



Yellow Cluster:

Most Common Restaurants:

- Bakery Restaurant
- Seafood
- Japanese
- French



Blue Cluster:

Most Common Restaurants:

- Sushi
- Japanese
- Burgers
- Vietnamese
- Pizza

Income: \$107562 Income: \$86775

Discussion

- Higher income -> More expensive restaurants
- More factors may affect the restaurant categories, such as:
 - Culture
 - Race
 - Household size
 - Etc.

THANK YOU

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