COURSERA CAPSTONE

IBM DATA SCIENCE CERTIFICATE

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CHOOSING THE RIGHT LOCATION

FOR A CHINESE RESTAURANT IN CHICAGO

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BUSINESS PROBLEM

OVERVIEW

The objective of this capstone project is to find the ideal place to open a Chinese Restaurant in Chicago. Using data science methodology and machine learning techniques such as k-means clustering etc. This project aims to provide in-depth research and thorough analysis.

TARGET AUDIENCE OF THIS PROJECT

This project is particularly useful to property develoopers and investors looking to open or invest in new restaurants in Chicago. This project is timely as the city is currently flourishing with good restaurants. Research shows that people are more and more willing to spend money on fine dining restaurants.

DATA

1. List of Community Areas in Chicago. This defines the scope of this project which is confined to the city of Chicago, major city in the Middle West of the United States of America.

2. Latitude and longitude coordinates of those community areas. This is required in order to plot the map and also to get the venue data.

3. Venue data, particularly data related to different types of restaurants. We will use this data to perform clustering on the Community areas.

METHODOLOGY

- Web Scraping
- Pandas Data Cleaning
- Data Wrangling
- Folium Data Visualization
- K-means Clustering

RESULTS

- Right is visualizations of community areas of Chicago.
- We extract restaurant data from Foursquare API and use K-means to cluster the data.

RESTAURANTS IN DIFFERENT COMMUNITIES OF CHICAGO

CONCLUSION

- Answer to business question: The neighborhood in Cluster 0 and Cluster 2 are preferred locations to open new restaurants
- Findings of this project will help the relevant stakeholders to capitalize opportunities on high potential locations while avoiding unpromising areas when investing

Thank you!

–Johnny Appleseed