

Capstone Project - The Battle of Neighborhoods (Week 1)

Market Analysis for a new restaurant in Cleveland's University Circle District

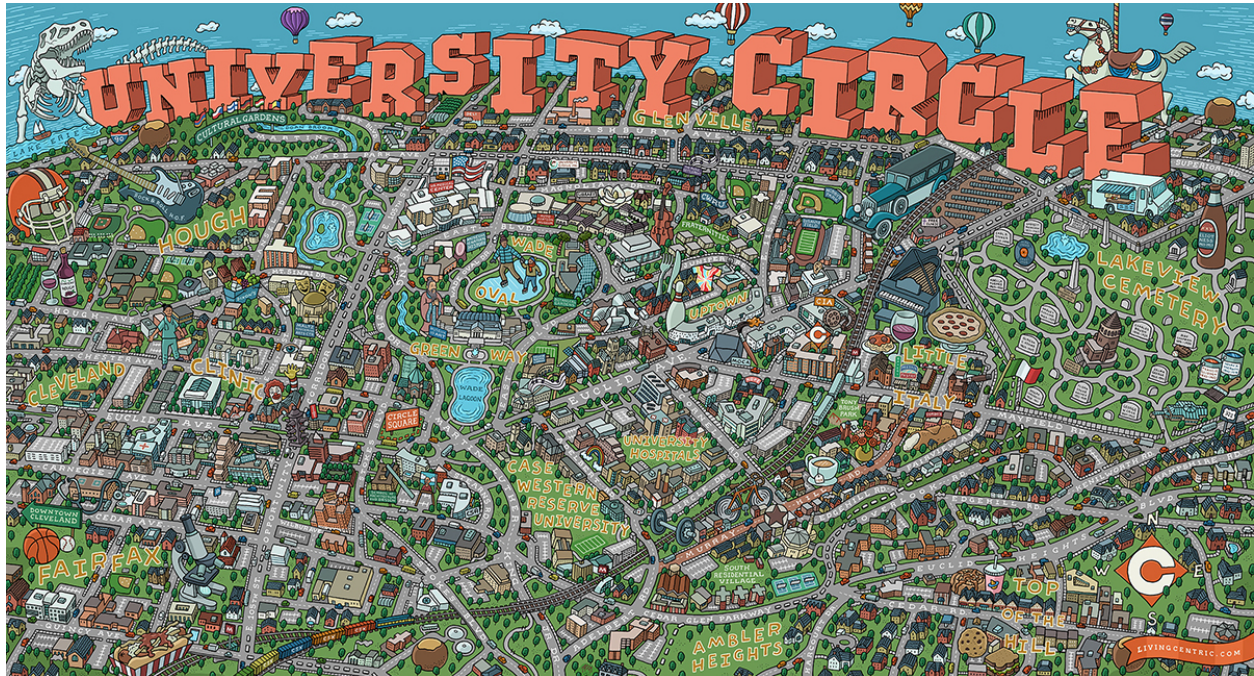
Chia-Hung Kuo 18 May 2020



<https://www.timeout.com/cleveland/things-to-do/best-things-to-do-in-cleveland>



<https://www.facebook.com/ThisisCleveland/photos/a.10150411651779714/10158606223839714/?type=3&theater> <https://www.facebook.com/ThisisCleveland/photos/a.10150411651779714/10158054256509714/?type=3&theater>



Introduction

Business Understanding

Project objective:

Cleveland's University Circle district is a fast-growing neighborhood surrounded by major hospitals, top-ranking universities, and world-class museums. They draw approximately 2.5 million visitors annually in addition to the faculty, hospital employee, school faculties and students

It is a great area to start a restaurant. Utilizing the data science analytic approach to conduct a market analysis is the first step. This report will go through the business around the area to discover our potential unique type of restaurant concepts and a proper location.

Problem:

Avoid the overcrowded market of similar types of restaurants and unsafe neighborhoods

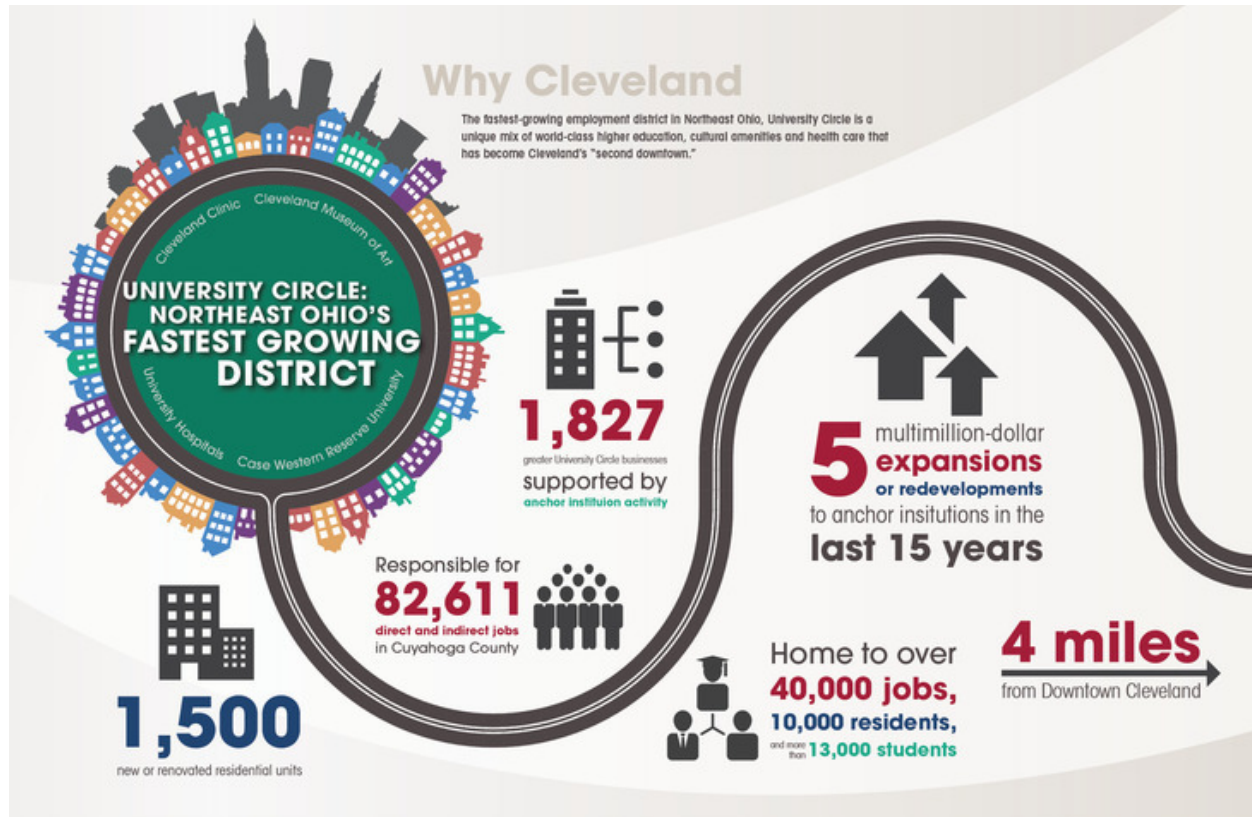
Question:

Find out the unique features for the new restaurant and the populated location in a safe neighborhood

Analytic Approach

Clustering:

Using K-Means clustering and Folium for data visualization



Data

Data requirements

Data Collection:

The available data are obtained from:

- List of Cleveland neighborhoods with clustered venues through Foursquare API.
- List of housing information in University Circle
- 2016 Crime in the U.S. by FBI <https://ucr.fbi.gov/crime-in-the-u.s/2016/crime-in-the-u.s.-2016/tables/table-6/table-6-state-cuts/ohio.xls>

Libraries:

- Pandas, Urllib, Geopy, Requests, Scikit Learn, and Folium