

Finding a place for a new food venue in Chicago

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Introduction

Background

With a population of 2.7 million (2019) and 57.7 million visitors to the city during 2018, Chicago is a candidate for leisure business opportunities. Before 2020 and the Coronavirus outbreak, Chicago hosted about 200 annual festivals and parades. It has 250 live music venues, more than 200 theaters and other arts and entertainment venues that attract visitors.

Problem

Due to the diversity of food venues in Chicago, it is difficult to find a place to open a new food venue. This project will look for a different approach for finding a place for a new food venue in Chicago.

Idea

In this project, Foursquare data from the city of Chicago will be used to analyze the city's business opportunities for opening a food venue based on the number of arts and entertainment venues and the corresponding number of food venues in Chicago neighbourhoods.

The assumption is that arts and entertainment venues attract visitors (both local and tourists) that are potential clients of food venues. Therefore, the analysis will try to find neighbourhoods with potential for new food venue business based on the relation between the number of arts and entertainment venues that attract visitors and number of food venues.

Description of the data

Data that will be used

In this project, the following data will be used for the analysis:

Chicago neighbourhoods

For better geographical resolution, neighbourhoods will be used. The neighbourhood's names will be used to extract their geographic coordinates. Chicago neighbourhoods' names will be extracted from Wikipedia.

Chicago neighbourhoods' geographic coordinates

The longitude and latitude coordinates will be used to query Foursquare for venues in Chicago. Geographic coordinates will be extracted using Nominatim geocoding Python API.

Food venues in Chicago

Will be used to analyze the count of food venues in each neighbourhood and for neighbourhoods clustering.

Arts and entertainment venues in Chicago

Will be used to analyze the count of arts and entertainment venues in each neighbourhood and for neighbourhoods clustering.

Foursquare data explained

Foursquare - a location data platform that helps people discover and share information about businesses and attractions based on location.

Places by Foursquare - a database of venues with over 900 categories. database of more than 105 million places worldwide and an API that enables location data. The API will be used to extract venues data using geographic coordinates.

Venue categories that will be used

Arts & Entertainment – this category includes venues as: theatres, museum, music venues, performing arts venues, sport stadiums, and more.

Food – this category includes venues as: restaurants, coffee shops, and more.

The data that will be extracted is the type of each venue, as: art gallery, museum, coffee shop, Mexican restaurant, and not the venue name. The venue type is relevant for the clustering of the neighbourhoods.

Data sources:

1. Chicago Release 2018 Annual Tourism Report - https://www.chicago.gov/city/en/depts/mayor/press_room/press_releases/2019/april/2018AnnualTourismReport.html
2. Chicago population - <https://www.census.gov/quickfacts/fact/table/chicagocityillinois,US/PST045219>
3. Chicago neighbourhoods – https://en.wikipedia.org/wiki/List_of_neighborhoods_in_Chicago
4. Chicago facts - <https://www.chicago.gov/city/en/about/facts.html>
5. Foursquare Places API - <https://foursquare.com/>