

Predicting Neighborhood to open a Restaurant in Chicago, Illinois

1. INTRODUCTION

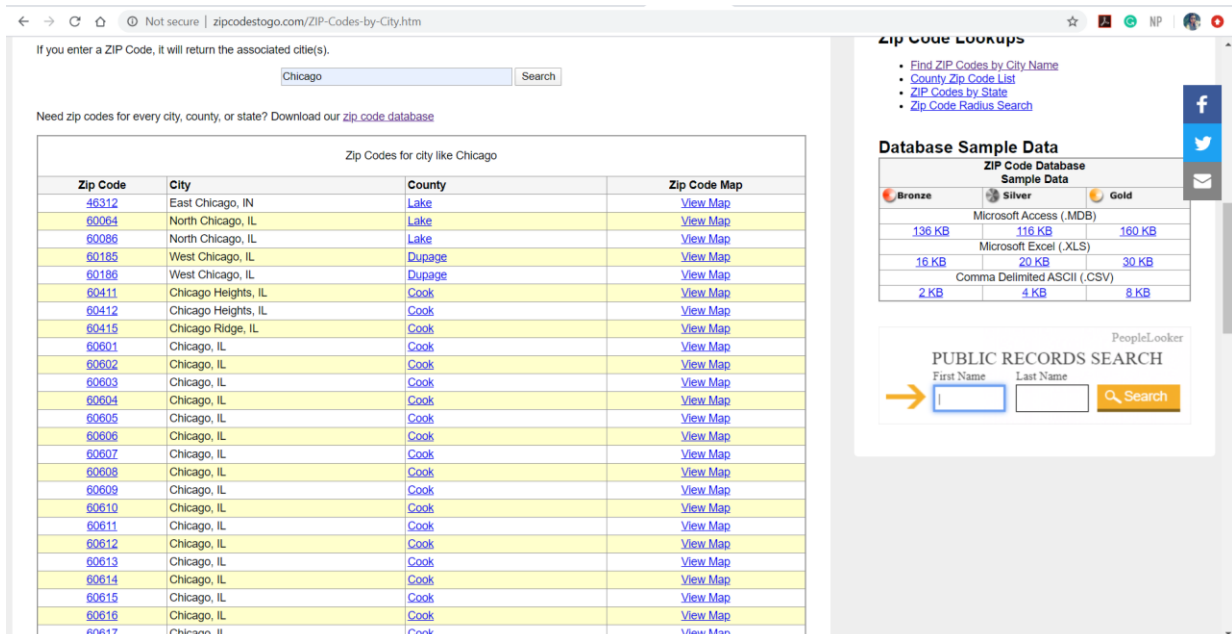
1.1 Problem:

Location plays a major role in the success of any restaurant. Therefore, a preliminary market analysis will help in determining a favorable location for the new restaurant. Factors like its neighborhood, or surrounded by the same cuisine restaurant, or have easy access to transportation, will affect sales. This project uses location data of Chicago to find out popular eateries present in its neighborhood and then to predict which neighborhood will be the best to open a restaurant.

2. DATA ACQUISITION AND CLEANING

2.1 Data Sources:

The Dataset used for getting zip codes for the state of Illinois is taken from this HTML webpage <https://www.zipcodestogo.com/ZIP-Codes-by-City.htm> where we searched for Chicago. It looks like this:



The screenshot shows a web browser window with the URL <https://www.zipcodestogo.com/ZIP-Codes-by-City.htm>. The page has a search bar with "Chicago" entered and a "Search" button. Below the search bar, there is a link to "Download our zip code database". The main content area displays a table titled "Zip Codes for city like Chicago". The table has four columns: "Zip Code", "City", "County", and "Zip Code Map". The table lists various zip codes and their corresponding cities and counties, with a "View Map" link for each entry. On the right side of the page, there is a sidebar with "Zip Code Lookups" and "Database Sample Data" sections. The "Database Sample Data" section shows a table with columns for "Bronze", "Silver", and "Gold" data formats, including file sizes and download links. Below this, there is a "PUBLIC RECORDS SEARCH" section with input fields for "First Name" and "Last Name", and a "Search" button.

Zip Code	City	County	Zip Code Map
46312	East Chicago, IN	Lake	View Map
60064	North Chicago, IL	Lake	View Map
60086	North Chicago, IL	Lake	View Map
60185	West Chicago, IL	Dupage	View Map
60186	West Chicago, IL	Dupage	View Map
60411	Chicago Heights, IL	Cook	View Map
60412	Chicago Heights, IL	Cook	View Map
60415	Chicago Ridge, IL	Cook	View Map
60601	Chicago, IL	Cook	View Map
60602	Chicago, IL	Cook	View Map
60603	Chicago, IL	Cook	View Map
60604	Chicago, IL	Cook	View Map
60605	Chicago, IL	Cook	View Map
60606	Chicago, IL	Cook	View Map
60607	Chicago, IL	Cook	View Map
60608	Chicago, IL	Cook	View Map
60609	Chicago, IL	Cook	View Map
60610	Chicago, IL	Cook	View Map
60611	Chicago, IL	Cook	View Map
60612	Chicago, IL	Cook	View Map
60613	Chicago, IL	Cook	View Map
60614	Chicago, IL	Cook	View Map
60615	Chicago, IL	Cook	View Map
60616	Chicago, IL	Cook	View Map
60617	Chicago, IL	Cook	View Map

To obtain latitude and longitudes of grouped cities Geopy Library of Python will be used. Further, we will use Foursquare API to get coordinates of restaurants located near Cities/Boroughs based on their type of Cuisine.