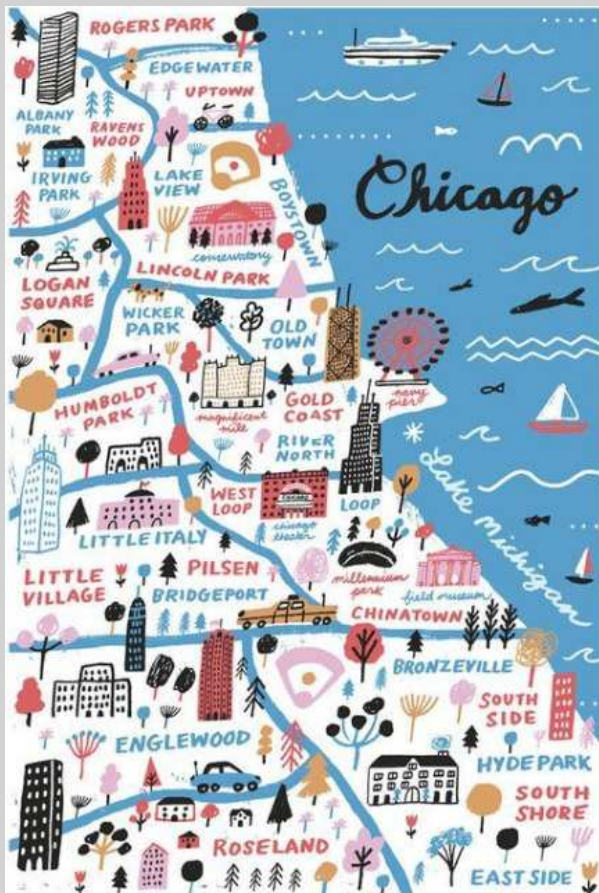


The battle of neighborhoods

Which neighborhood for moving into



June 2, 2019

Introduction

- Chicago as the best city chosen to move into
- Optimal locations replete with restaurants and grocery stores

Business problem:

- Choice of first neighborhood to move to
- Full of restaurants
- Full of grocery stores
- Close proximity

Success criteria:

- Meeting above criteria



Chicago - cuisine

The City of Chicago is famous for its excellent cuisine. Its food culture includes an array of international cuisines influenced by the city's immigrant history.

- ◉ Central and Eastern European immigrants, especially Jewish immigrants - bagels, cheesecake, hot dogs, knishes, and delicatessens
- ◉ Italian immigrants - New York-style pizza and Italian cuisine
- ◉ Jewish immigrants and Irish immigrants - pastrami and corned beef
- ◉ Chinese and other Asian restaurants, sandwich joints, trattorias, diners, and coffeehouses are ubiquitous throughout the city
- ◉ Mobile food vendors - Some 4,000 licensed by the city
- ◉ Middle Eastern foods such as falafel and kebabs examples of modern New York street food
- ◉ Famous for fine dining Michelin starred restaurants. The city is home to "nearly one thousand of the finest and most diverse haute cuisine restaurants in the world", according to Michelin.

Data description - 1

- ◉ Chicago has 77 boroughs and 246 neighborhoods
- ◉ The data comes from <https://data.cityofchicago.org>
- ◉ and from https://en.wikipedia.org/wiki/List_of_neighborhoods_in_Chicago



Data description - 2

● Data from foursquare

Chicago geographical coordinates data will be utilized as input for the Foursquare API, that will be leveraged to provision venues information for each neighborhood.

We will use the Foursquare API to explore neighborhoods. The below is image of the Foursquare API data

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Central Station, Dearborn Park, Museum Campus,...	41.866856	-87.628651	Stan's Donuts & Coffee	41.867516	-87.626402	Coffee Shop
1	Central Station, Dearborn Park, Museum Campus,...	41.866856	-87.628651	Tejas Yoga	41.865584	-87.626084	Yoga Studio
2	Central Station, Dearborn Park, Museum Campus,...	41.866856	-87.628651	Eleven City Diner	41.868450	-87.626118	Diner
3	Central Station, Dearborn Park, Museum Campus,...	41.866856	-87.628651	Kriser's Natural Pet	41.869137	-87.627229	Pet Service
4	Central Station, Dearborn Park, Museum Campus,...	41.866856	-87.628651	Five Guys	41.867697	-87.625852	Burger Joint

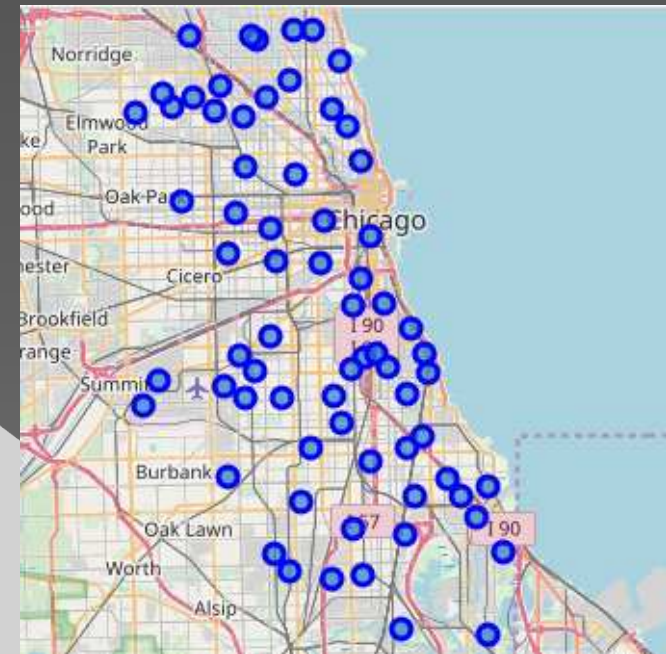
Analytical approach

- Part 1 – retrieving all the necessary data
- Part 2 – calculation of ratios:
 - > % of restaurants / total venues
 - > % of grocery stores / total venues
- Analyze Each Neighborhood to get the top 5 most common venues in each neighborhood



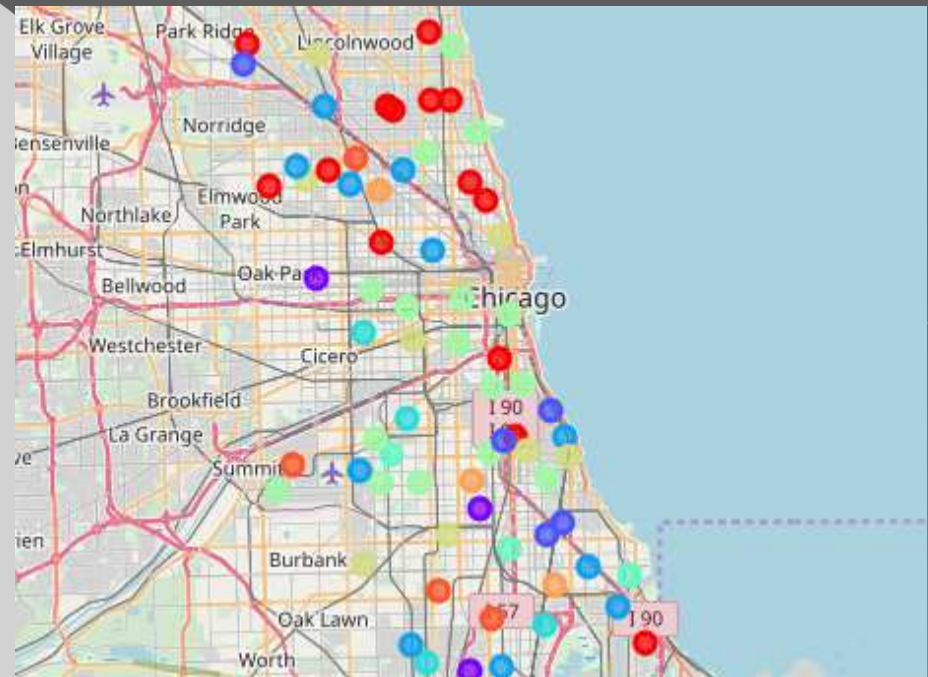
Methodology

- ◉ Load the data and pre explore
 - > Json
 - > Wikipedia
- ◉ Transform the data from the dictionaries into pandas data frames
- ◉ Use foursquare to obtain the data about neighborhoods' venues and merge with our borough Chicago data
- ◉ Geopy and folium are used to map Chicago with neighborhoods superimposed onto it



Results

- Clustering the neighborhoods
 - > Cluster 0 – red – the best ratio of all restaurants and grocery stores compared to the total # of venues and top 5 venues among all
 - preferred neighborhoods for moving in
 - > Cluster 3 – ocean blue
 - > Cluster 7 - olive



The image is a square graphic divided diagonally from the bottom-left to the top-right. The upper-left triangle is a dark charcoal gray, and the lower-right triangle is a light, neutral gray. Centered across the diagonal is the text "Thank you" in a bright pink, sans-serif font.

Thank you