

# FINDING A PLACE FOR A NEW FOOD VENUE IN CHICAGO

IBM DATA SCIENCE CAPSTONE PROJECT

MARCH-2021

# BACKGROUND

**Project goal:** *“come up with an idea to leverage the Foursquare location data to explore or compare neighborhoods or cities of your choice or to come up with a problem that you can use the Foursquare location data to solve.”*

**Problem** – finding a place to open a new food venue using data from Foursquare.

**Idea** - Use the relative number of arts and entertainment venues and the corresponding number of food venues in Chicago community areas.

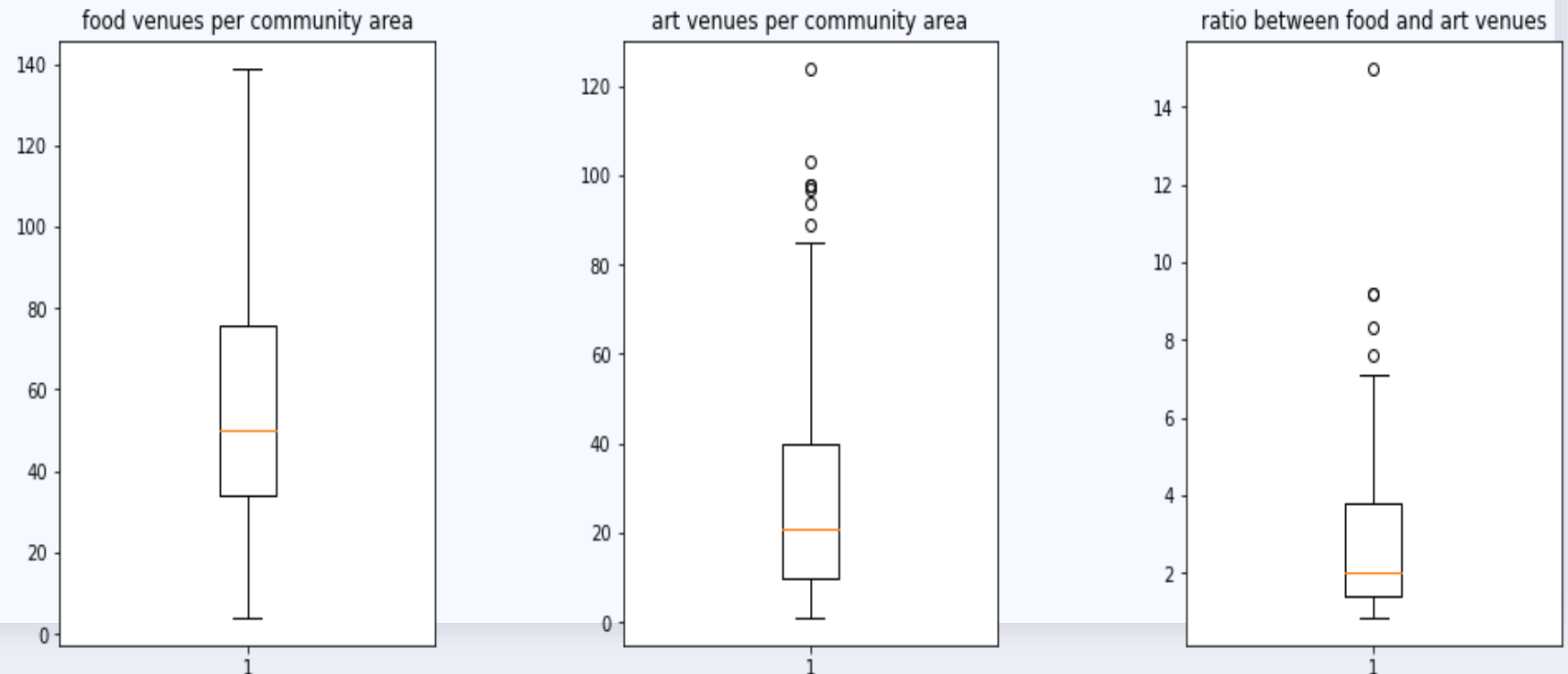
**Assumption** - arts and entertainment venues attract visitors that are potential clients of food venues.

# DATA ACQUISITION AND CLEANING

- Chicago community areas – extracted from Wikipedia using BeautifulSoup HTML parser Python package.
- Chicago community areas' geographic coordinates – extracted using Nominatim geocoding.
- Venues in Chicago – extracted from Foursquare.
- In total, 6,819 rows and 2 features in the cleaned dataset.

# DESCRIPTIVE STATISTICS

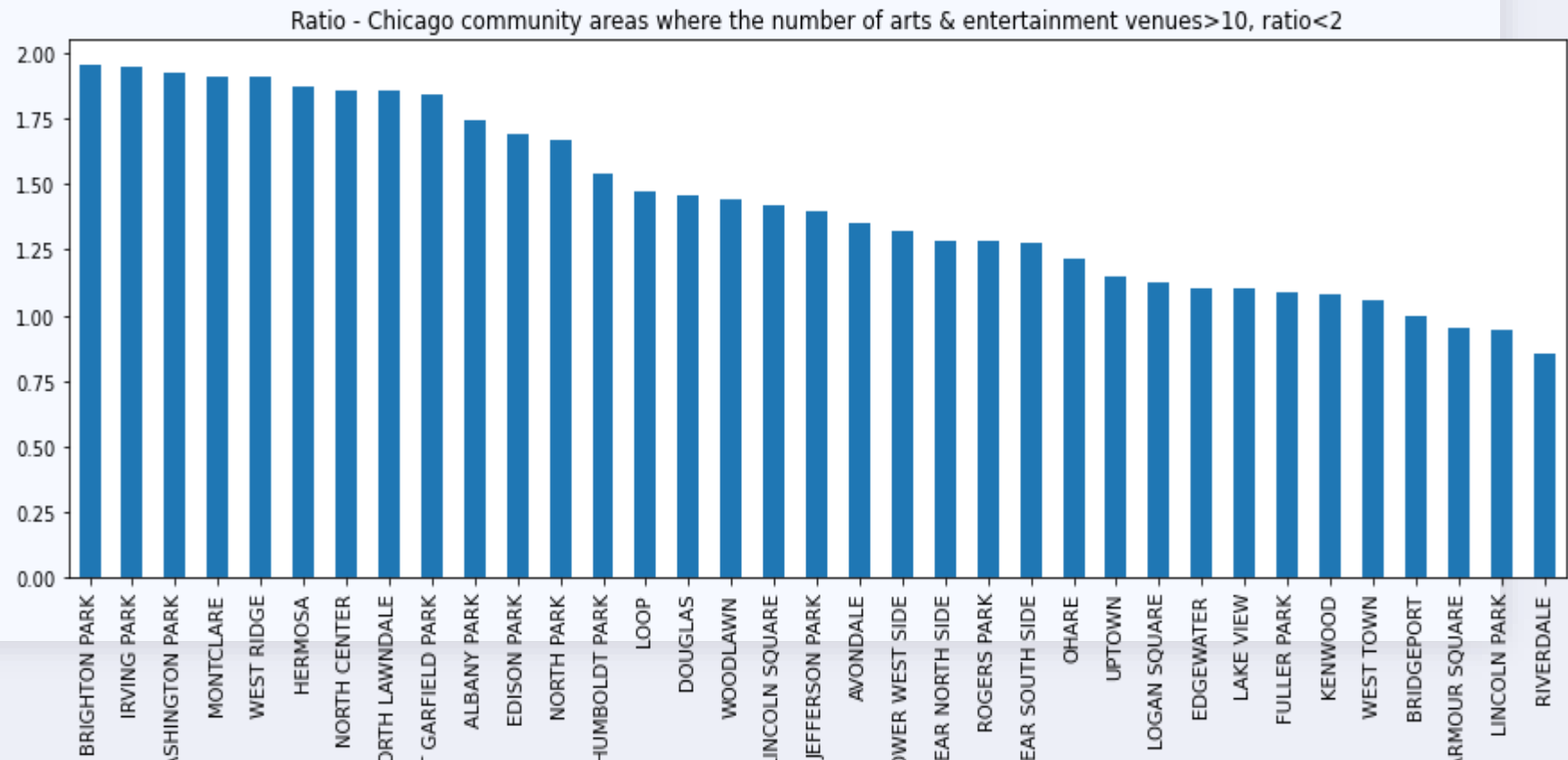
- The mean value of the ratio is 3.04, while 50% of the community areas are with a ratio lower than 2.
- The mean value of the arts and entertainment venues per community area is 31.



# FILTERING THE RESULTS

Community areas that have a ratio value below 2 and number of arts and entertainment venues above 10.

Potential set of community areas for opening a new food business.



# TOP 10 COMMUNITY AREAS

Top 10 community areas with the highest count of arts & entertainment venues and ratio between the number of food venues and the number of arts & entertainment venues below 2.

food_count	art_count	ratio	community_areas
131	124	1.056452	WEST TOWN
118	103	1.145631	UPTOWN
110	98	1.122449	LOGAN SQUARE
139	98	1.418367	LINCOLN SQUARE
92	97	0.948454	ARMOUR SQUARE
121	94	1.287234	NEAR NORTH SIDE
98	89	1.101124	LAKE VIEW
94	85	1.105882	EDGEWATER
121	83	1.457831	DOUGLAS
103	76	1.355263	AVONDALE

# CONCLUSION

The data that was extracted from Foursquare was sufficient for implementing the idea of selecting community areas that are potential for opening a new food venue in a Chicago community area.

The data is a preliminary step for continuing investigation before selecting a location for opening a food venue.

Further analysis is needed for better understanding the business potential of opening a new food venue.