

Segmenting and Clustering Neighborhoods in Chicago, Illinois

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Introduction/Business Problem

Chicago, on Lake Michigan in Illinois, is the third largest city in the U.S and one of famous international financial centers in the world. The city is also renowned for its museums, including the Art Institute of Chicago with its noted Impressionist and Post-Impressionist works. According to 2018 Time Out City Life Index, Chicago was ranked first in the global quality of life survey of 15,000 people in 32 cities.

So, despite Chicago is famous for crime capital, there are many people considering to settle in this city. When they choose the community and apartment they will live in, safety and neighborhood facility can be top determinant factors. For people who consider to moving in this city, they are willing to read reports in answering the following questions:

1. What community is the safest in Chicago?
2. Is crime rate connected with average income and education?
3. Using Foursquare data, what venues are most common in different neighborhoods in Chicago?
4. How different are venues distributed in neighborhood of different crime rate?

Data

Chicago Socioeconomic Indicators:

<https://ibm.box.com/shared/static/05c3415cbfbtfnr2fx4atenb2sd361ze.csv>

Chicago Public Schools:

<https://ibm.box.com/shared/static/f9gijv1gjmxxzycdhplzt01qtz0s7ew7.csv>

Chicago Crime Data:

<https://ibm.box.com/shared/static/svflyugsr9zbqy5bmowgswgemfpm1x7f.csv>

Venue Data:

<https://foursquare.com/>

