

Best neighborhoods in NY to open a new pizza place

Introduction:

I tried to find the best neighborhoods to open a pizza place in New York. Finding the neighborhoods with the best potential could be helpful for people looking to open a new pizzeria who want to find the most promising place to start their new business. This is based on the clear premise that the location influences the success a restaurant can have, and a careful analysis of existing businesses in the different city areas can help an investor make the right choice when choosing the place to start his new restaurant.

Data:

To segment the city of NY in different areas (neighborhoods), a json file provided in the IBM Data Science Professional Certificate course on coursera.com will be used.

The ML model used (k nearest neighbors regressor) requires external data to be trained (and tested on). For this purpose, I used data on the city of Chicago: this choice is due to the fact that a big city was needed (the more the data, the better the model), and that the city had to be possibly similar (culturally) to NY, which made a city in the US the best choice. While the two cities are certainly not the same, the model showed to work well on the city of NY when applied. (A later exam of the results showed that Pizza places tend to be slightly more successful in respect to other businesses in NY than in Chicago: this doesn't seem to be a problem for the analysis since it tends to act in a conservative way, recommending less areas). To segment the city of Chicago into different neighborhoods, data from wikipedia.com was used (https://en.wikipedia.org/wiki/List_of_neighborhoods_in_Chicago). The python library geocoder was used to get the coordinates of the listed neighborhoods.

The machine learning model was trained to predict the frequency of pizza places based on the frequency of other types of businesses in the area: to do so, the Foursquare API was used to get lists of businesses around the examined location. Of the returned information, I was interested in the business type.