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Optimal Pizzeria Location Determination in The Bronx



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Introduction

New York has a long history of producing bold and original styles of pizza. The first pizzeria to be opened in the United States was Lombardi's founded by Gennaro Lombardi in Little Italy, Manhattan in 1905. An Italian immigrant and pizzaiolo, or pizza maker, from Naples, Lombardi brought his favorite dish to America and started a pizza revolution that would leave a permanent mark on the culture of New York. As time passed, the pizza Lombardi created became a fusion of Italian cuisine and American tastes leading to the iconic New York-style pizza many enjoy to this day. Possessing a thin, hand-tossed crust and served in large slices to be eaten on the go, New York-style pizza is as innovative and flavorful as the city where it originated.

New York has become a popular destination for tourists and pizza connoisseurs alike, and with tourism comes business opportunity. An estimated 62.8 million people visited New York in 2017 and that number is expected to continue to increase. According to research from Pizza Today, Americans spend nearly \$38 billion on pizza; equating to over 3 billion pizzas sold each year. The average American will eat 46 slices of pizza this year. With statistics like that, many entrepreneurs are eager to get a "slice" of the disposable income of New York tourists and residents.

Business Problem & Audience

The purpose of this data science capstone project is to analyze the neighborhoods within The Bronx, New York to determine which neighborhood or group of neighborhoods would be the best in which to open a pizzeria. I will use the methodology and techniques which I have learned over the course of pursuing my IBM Data Science Professional Certification in order to address this issue. This research would be of use to the many entrepreneurs and restaurateurs seeking to expand their existing pizzeria footprint or those looking to disrupt the competitive New York pizza restaurant complex.

Data Sources & Utilization

I will be using the below listed sources to solve this business problem:

- Foursquare API Data
 - This will provide venue data which can be utilized to determine not only which neighborhoods within The Bronx have pizzerias, but also to determine the number and frequency of pizzerias within each neighborhood.
- Location Data
 - Location data will be obtained from the following link which contains a list of New York boroughs and neighborhoods.
 - https://geo.nyu.edu/catalog/nyu_2451_34572
- Geospatial Data for boroughs and neighborhoods within New York
 - This information is housed in the above link and will be utilized to plot a map of the Bronx and provide a visual representation of neighborhood clusters.