The Battle of Neighborhoods

IBM Data Science Professional Certificate – Capstone Project

Opening a new ice cream shop in Rome, Italy

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Introduction

Background

Rome is the capital city and a special comune of Italy as well as the capital of the Lazio region. With 2,860,009 residents in 1,285 km^2 (496.1 sq mi), it is the country's most populated comune and the third most populous city in the European Union by population within city limits. In 2019, Rome was the 11th most visited city in the world with 10.1 million tourists, the third most visited in the European Union, and the most popular tourist destination in Italy and its historic centre is listed by UNESCO as a World Heritage Site.

Business problem

A client famous for his high quality ice cream (gelato) wants to open a new ice cream shop in Rome. He is not sure in which neighborhood is better to open the shop due to the high competition. Italian gelato is very well known and it is easy to imagine that in a city like Rome the ice cream shops are very popular. In this project the neighborhoods of Rome will be examined in order to determine which are the neighborhoods with a low presence of ice cream shops and then less competition.

Target audience

This project is useful for investors interested in opening an ice cream shops in Rome.

Data

In order to solve the business problem we will need:

- A list of neighborhood in Rome
- Longitude and Latitude for each neighborhood
- Ice cream shops venue data

The list of neighborhood in Rome is available on wikipedia: https://en.wikipedia.org/wiki/Category:Quarters_of_Rome. The wikipedia page will be used to obtain the relevant information, using web scraping techniques, Python requests and BeautifulSoup packages.

The longitude and the latitude for each neighborhood will be obtained using the Python Geocoder package. At last, Foursquare API will be used to retrieve information of exisisting ice cream shops in Rome.