

ANALYZING THE BOROUGHs IN PARIS FOR BETTER TOUR ADVISING

1. INTRODUCTION

1.1 Description and Discussion of background

Paris , capital city of France is a bustling city full of historic monuments and interesting venues . It is the most populous city of France with an area of 105 square kilometers (41 square miles) and an official estimated population of 2,140,526 residents i.e. with 252 residents per hectare, not counting parks. Paris is divided into 20 districts called "arrondissements"(French word) and they are numbered 1 to 20 arranged in the form of a clockwise spiral), starting from the middle of the city, with the first on the Right Bank (north bank) of the Seine.

Paris being rich in French culture and heritage is a tourist attraction to a large set of people. Paris received 23 million visitors in 2017, measured by hotel stays. Looking at the large number figure of the visitors it's obvious the tour advisors need to keep in mind that the tourists are looking to visit some specific areas in Paris and so it's needed to know where to invest their money and time during a tour and to choose a Borough wisely to take accommodation in.

In order to advise a specific Borough to choose for accommodation we can cluster the similar type of Boroughs according to the venue densities in that area with the help of which tour advisor can suggest a particular set of Boroughs according to the venue interests of the visitors.

1.2 Data description

To obtain the intended results we can extract data from following sources:-

- I extracted the data about Boroughs and Quarters in Paris from the demographic data of Paris on Wikipedia page and cleaned the data removing unnecessary parameters/columns.

- I found the latitude and longitude of the Boroughs in Paris with the help of Nominatim API which is provided by the geocoder classes present in the geopy module in Python.(The module might need to be installed before you use it).
- Further the latitudes and longitudes of common venues are found with the help of Four Square API.
- I found out that the postal codes of Boroughs in Paris are made by adding the Arrondissement number of Boroughs to 75000 , so i entered this data by myself in the dataframe using codes in python. For example- The borough number for 'Louvre ' is 1 so it's postal code will be 75001.