|  |
| --- |
| Neighborhood Battle-Recommendation for Tourist.  2019 |
|  |
| August 17  Authored by: Sharmila |



# Table Of Contents

# Title……………………………………………………………………PageNo.

# Introduction/Business Requirement…………..………………...………….3

# Executive Summary………………………………………………………….3

# Data……………………………………………………………………………3

# Methodology………………………………………………………………….4

# Result………………………………………………………………………….8

# Discussion…………………………………………………………………….8

# Conclusion…………………………………………………………………….8

# Introduction

# The Problem

# As a tourist it is a big task to decide on which all places to visit in a limited amount of time when we are on a trip. It would be of a great help if we know which all places to concentrate so that the time could be efficiently utilized on a trip.

# The Background

# The things to be considered are,

# Number of venues

# By knowing the number of venues in a particular area the tourist would be able to decide which places to concentrate and how much time to spend on each venue or in a particular area on the trip

# Category of Venues

# The Concentration based on the category of Venues would be helping the tourist to decide which areas to book a stay on or to spend more time in based on personal interest.

# Executive Summary

# The intention of this project is to perform a neighborhood analysis on the venues of all the boroughs of London. So that recommendation can to made to tourist visiting London.

# The essence of the analysis would be concentrated on suggesting a tourist which borough or area in London to concentrate on to have most fun in his/her trip.

# The Venues would be segregated based on the category and the borough with concentrated venues would be highlighted.

# If a person who have no clue about London want to have a tour, this analysis would be of great help to him/her to decide on the complete itinerary for his/her trip.

# Data Section

# The Borough details of London was acquired from [here](https://en.wikipedia.org/wiki/List_of_London_boroughs), just the list of boroughs were obtained from this table.

# Another table “Postcode\_districts.csv” was downloaded from London open data repository to get the London Postcode details. The fields were filtered out and only the required fields were used in the analysis.

# Methodology

# Data cleansing and Data Wrangling

# Two tables has been acquired as mentioned in the Data section and from the first table only the list of boroughs were filtered out from the Wikipedia table.

# The second table “Postcode\_districts.csv” has the postcode details and Latitude and Longitude details for the boroughs.

# Postcodes relevant to the list of Boroughs from the first table are selected from the table and saved into a data frame say LondonData.

# Geographic coordinates of London were derived, and a map has been plotted with the postcodes and latitude and longitude details from the filtered data frame to visualize the all the relevant London borough postcodes on a map.

# Foursquare API

# FourSquare API call has been made next to get all the relevant venues for the coordinates of London city(Central London)

# The foursquare API returned 100 venues as a Data Frame “nearby\_venues\_London”

# These venues has been segregated based on the category obtained from the foursquare API along with the key words like “Restaurants”, “Bars”, etc., to divide those venues into various groups.

# The venues has been segregated into 5 different categories of interest to tourist,

# Eateries

# Historic places

# Recreational spots

# Shopping venues

# Parks and Gardens

# Based on this segregation, it was understood that Central London is rich with Historic venues with numerous restaurants and recreational spots.

# A screenshot of a cell phone Description automatically generated

# A function “getlatlang” has been written to get the central geographical coordinates of each Borough in London. Unique borough names have been retrieved from the data frame “LondonData”.

# These borough details were passed to the function and the latitude and longitude for each borough was obtained.

# These details were passed to call the function to make the foursquare API call to get the venue details of each of the borough and accumulate and present it as a pandas data frame “nearby\_venues”

# The Venues obtained were also divided into 5 groups as in central London data.

# As shown in the above plot, rest of London has innumerable Restaurants, and a lot of shopping centers.

# Finally, the London boroughs were clustered with the K means clustering algorithm into 5 clusters.

# 10 most common venues in each neighborhood has be obtained and listed. Cluster label obtained from the K means algorithm was clubbed with this file with the 10 most common venue details for each borough.

# Along with its latitude and longitude details.

# Then the venues in the clustered were plotted on a map of London as shown in the image below.

# A picture containing text, map Description automatically generated

# The Boroughs and their venue count were plotted in a bar chart as shown in the below image

# A close up of a logo Description automatically generated

# Result

# As per the above plot,

# Kingston upon Thames

# Southwark

# Islington

# Ealing

# Westminster

# Are the boroughs with most number of venues which could interest the tourist other than central London which has 100 venues itself.

# Discussion

# This analysis is just based on the category of the venues, on further analysis this could be extended to get the rating for venues and further the recommendation on the best venues to visit for the tourist. That would be of better help to the tourist.

# Conclusion

# Based on the detailed analysis done on the London venues it could be concluded that,

# Tourist who are interested in history and heritage could choose to spend time in Central London.

# Tourist who are interested in shopping and need a variety of food options could choose among the rest of the London boroughs for their tour.

# 