THE BATTLE OF NEIGHBORHOODS

Submitted By

Sharvari Upasani

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PREDICTING WHERE
TO OPEN RESTAURANT IN DUBAI

1. Introduction

1.1 Background

Dubai is a city based in the United Arab Emirates. It is a cosmopolitan city with multiple cultures. It is a place where there are many expatriates. About 70% of Dubai's population consists of expatriates. Hence, there are many types of food/cuisines liked by people. Cuisines like Filipina, Italian, Indian, Pakistani etc., are some of the most common cuisines.

As, there are plenty of people and many different food types, the question arises, is there a need to open a restaurant in Dubai? If yes, where should it be located so that it shall be visited/utilized more and what different types of food should we sell at this restaurant?

1.2 Problem

We do have data for metro stations & metro riders. We can also predict the restaurants that are located near metro stations using the Foursquare API. Our whole idea is to predict a place/cuisine that shall be feasible for utilization of our restaurant.

Hence, we need to modify/combine the data and our findings so that we can predict the actual frequency of places where there are eateries and their cuisines.

1.3 Primary Predictions & Why this Data.

Why do we use Metro stations data? There are many Metro users in Dubai. Also, as per Dubai Government's protocol - we cannot eat/drink at metro stations or in metro trains. Thus, it is a good idea to open a restaurant near a Metro Station, which will be easy for passengers to drop-in/take away their favorite food at their convenience.

2. Data

2.1 Dubai Metro Data

The data for Dubai metro stations is used from the xls file provided by https://bayanat.ae.

This data gives an idea of the Metro stations in dubai. There are two types of lines – Red Line and Green Line metro stations. Dubai Metro Rail is distributed across these two lines. Hence, a list of all the metro stations with a description of Metro Line is shared in the data. Also, there are Latitude & Longitude Values of the Metro stations shared in the file.

Link: http://data.bayanat.ae/en_GB/dataset/metro-stations/resource/666412a8-3383-47df-b521-c70150698e6a

2.2 Dubai Metro Rider's Data

The data for Dubai metro riders is used from the xls file provided by https://bayanat.ae.

This data file consists of trips from a start station to end station on Red & Green Lines respectively. We need to calculate the number of trips from this data to check frequency of a station being used. We can calculate the trips from one station to another, hence to get a value of most used trip line and most visited station. Using the most used station, we will explore neighborhoods and try to build further datasets.

Link: http://data.bayanat.ae/en_GB/dataset/metro-ridership/resource/c9e51547-7f43-4475-9d35-17e0fc5e9eb2

2.3 Foursquare API

We'll collect different latitude longitudes of multiple metro stations. We'll try to compare their neighborhoods using Foursquare API. We'll try to get the data of various restaurants and their types. We'll also look at the distances at which the restaurants are located. Based on this data we'll explore the neighborhoods individually.

Using this data, we can get the place which has more number of restaurants. When it comes to restaurants, competition matters and also the cuisine. So based on those data sets we will try to fetch a viable cuisine or will try to find if Multi-cuisine is feasible or no.

Link: https://foursquare.com