Suitable New Location in Paris for an Indian restaurant

# Introduction /Business Problem

After successful launches in major Indian cities, a gourmet Indian restaurant chain has contemplated expanding outside Indian shores for the first time and they have shortlisted Paris as the city of choice. The rationale behind choosing Paris was because the city sees enormous tourist footfall from across the world all year round. The restaurateur wants to ensure a data-driven analytical approach select an appropriate location for the restaurant as this will be a critical success factor.

Although the restaurant is considered high-end in India, it aims to attract tourists in Paris and would seek locations with high traffic areas and/or near popular monuments/attractions. Foursquare data will be very helpful in making data-driven decisions about the best of those areas.

**Outcomes**

The goal is to identify the best district (*Arrondissements)* - to open the new restaurant. The results will be translated to management in a simple form that will convey the data-driven analysis for the best location to open restaurant.

# Data Requirements

The main districts in Paris are divided into 20 *Arrondissements Municipaux* (administrative districts), shortened to *arrondissements*.

The data regarding the districts in Paris needs to be researched and a suitable useable source identified. If it is found but is not in a useable form, data wrangling and cleaning will have to be performed.

The cleansed data will then be used alongside Foursquare data, which is readily available. Foursquare location data will be leveraged to explore or compare districts around Paris, identifying the high traffic areas where consumers go for sightseeing, shopping, dining and entertainment.

**Methodology**

The Data Science Workflow outline is as follow:

* **Outline the initial data that is required:**
  + District data for Paris including names, location data if available, and any other details required.
* **Obtain the Data:**
  + Research and find suitable sources for the district data for Paris.
  + Access and explore the data to determine if it can be manipulated for our purposes.
* **Initial Data Wrangling and Cleaning:**
  + Clean the data and convert to a useable form as a dataframe.
* **Data Analysis and Location Data:**
  + Foursquare location data will be leveraged to explore or compare districts around Paris.
  + Data manipulation and analysis to derive subsets of the initial data.
  + Identifying the high traffic areas using data visualisation and statistical analysis.
* **Visualization:**
  + Analysis and plotting visualizations.
  + Data visualization using various mapping libraries.
* **Discussion and Conclusions:**
  + Recommendations and results based on the data analysis.
  + Discussion of any limitations and how the results can be used, and any conclusions that can be drawn.

# Results

Out of the 20 Paris districts, the Data Science methodology reveals that there are 2 Paris districts that are most suited for opening a new Indian restaurant. Those districts are:

* 3eme Ardt
* 4eme Ardt

# Discussion

It’s not a surprise that these districts are all very centrally located in the circular arrangement of Paris's arrondissements. Locations fitting the criteria for popular venues would normally be in central locations in many cities of the world.

From this visualisation it is clear that on a practical level, with no data to base decisions on, the circle of the 20 districts is very large, and researching and then visiting them all would be a daunting and time-consuming task. We have narrowed the search area down significantly from 20 potential districts to 2 that should suit the restaurant business.

# Conclusions

There are many ways this analysis could have been performed based on different methodology and different data sources. I chose the method I selected as it was a straight forward way to narrow down the options, not complicating what is actually simple in many ways – meeting the criteria for the surrounding venues. The analysis and results are not an end point, but a starting point that will guide the next part of the process to find specific restaurant locations. The next part will involve domain knowledge of the industry, and perhaps, of the city itself. But the data analysis and resulting recommendations have greatly narrowed down the best district options based on data and what we can infer from it.