Capstone Project - The Battle of Neighborhoods

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Introduction

This project is the final part of the IBM Data Science Professional course in Coursera. The project requirement is to leverage the Foursquare location data to explore or compare neighborhoods or cities of choice or to come up with a problem that can use the Foursquare location data to solve.

This project will cover all phases in the data science life cycle to resolve a problem. The following components will be used:
- Folium library, including choropleth map, heatmap in map view
- Foursquare APIs
- K-Means Clustering Algorithm
- Pandas, Numpy

We will implement this project using the following steps/phases:
1. Define Business Objective
2. Data understanding
3. Modeling
4. Operationalize and acceptance

Business Objective/Problem Statement

This project involves a hypothetical scenario to explore the neighborhoods in Bangalore city to find the best location to establish a café. Bangalore is one of the largest capital cities in Southern India with a population of about 15 million. Bangalore is also one of the most ethnically diverse cities in the country. Bangalore is a hub for entrepreneurs and there is an opportunity in the quick service cafés catering to a young and aspiring population. With this idea in mind the objective is to explore the neighborhood and assess where the competition is and find the most suitable location to establish a café.

Bangalore is a fast-growing cosmopolitan from a diverse background. Since Bangalore is considered the IT hub of the country people from all over the country travel to Bangalore to do business. The Coffee Board of India is an organization managed by the Ministry of Commerce and Industry of the government of India to promote coffee production in India.
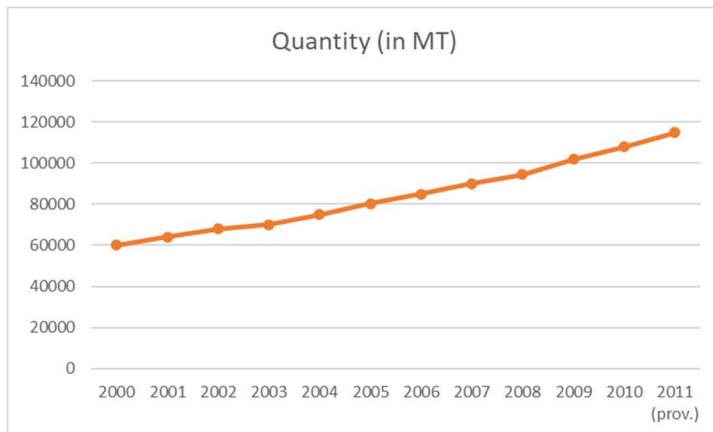
According to the board the domestic consumption of coffee in India has been steadily growing and expected to continue. All though there is no dearth to the number of cafes present in Bangalore the ever growing traffic congestion introduces the need for customers to find cafes or coffee places without having to commute for long hours and find a quiet spot to unwind.

Source: https://www.indiacoffee.org/coffee-statistics.html?page=CoffeeData#cof

The objective hence is to find the most preferred area using scientific methods to open a café in Bangalore city.