

# Coursera Capstone Project

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## 1. Problem

### 1.1. Description

#### Exploring venues in Indore, India using Foursquare and Zomato API

**Indore** (Hindi: इन्दौर), the commercial capital of Madhya Pradesh, is situated on Malwa plateau. Indore, growing at a fast pace, still manages to combine ancient and modern lifestyle in a unique atmosphere. 'Indories' (residents of Indore) are well known for their warm and friendly attitude. Indore is the only city in India which is having both an IIT and an IIM. Indore is well connected by road, rail and air with the Agra-Mumbai highway passing through the city. It is strategically located, being in close proximity to Mumbai (593 km) and Delhi (807 km).

Indore is the most developed city of Madhya Pradesh. Due to its location on the southern edge of the Malwa plateau, it makes an excellent tourist destination, during the day a cool breeze starts which makes the evenings quite pleasant. The city also has many good tourist spots in its vicinity.

Indore can be called the 'food city'. It has great variety and taste in food. It offers amazing chats (term used for spicy tangy food), Punjabi food, Indian sweets (jalebis, malpuas, kaju katli, and more).

Now, everyone who belongs to anywhere would swear by the food they get back home and the specialty of the corner shop. It is the same with Indore - It is Food Lovers paradise. They have a great breakfast in the morning with *kachories*, *samosas* and *pohas*, and then there are sweets as *jalebies*, *Imarties*, *Gulab jamuns* and *rabdi*. One must also not miss Baked (Bina Tala) Samosas/Patties, **Bana hua** style, all over the city, mostly available at Saanchi Milk Parlours. Everyone visiting Indore must drink shikanji. Don't confuse with lemon shikanji. It is very very special drink, taste is unforgettable. Try Nagori Shikanji, from 11:00am to 3:00pm, at Sarafa.

This project explores various venues in Indore and attributes the data based on user ratings and average price. To explore this information, this project involves the data from both Foursquare API and the Zomato API to fetch complete information of various venues (including name, address, category, rating and price). Further, a map of the venues with specific colour attributes will be plotted to highlight their position, and information about these venues. Such plots imbibe bountiful information in the form of their coloured

representations and location on the map. This enables any visitor to take a quick glance and decide what place to visit.

## **1.2. Interested Audience**

The target audience for such a project is twofold. Firstly, any person who is visiting Pune, India can use the plots and maps from this project to quickly select places that suit their budget and rating preferences. Secondly, a company can use this information to create a website or a mobile application, which is updated on a regular basis, to allow individuals to the city or even expand same functionality to other places.

## **2. Data**

### **2.1. Data Sources**

To get location and other information about various venues in the western part of Pune, a combination of data from the 2 API sources will be used together.

- Using the Four square's explore API (which gives venues recommendations), I fetched venues up to a range of 4 kilometres from the centre of Wakad, i.e. the heart of West Pune and their names, categories and locations (latitude and longitude) will be collected.

Using the name, latitude and longitude values, Zomato search API will be used to fetch venues from its database. This API allows us to find venues based on search criteria (usually the name), latitude and longitude values and more.

### **2.2. Data Cleaning**

Data collected from the 2 data sources, will be cleaned to extract the following vital information and then be used to solve the problem.

From Foursquare API (<https://developers.zomato.com/api>) we will retrieve the following information for each venue:

- Name: The name of the venue.
- Category: The category type as defined by the API.
- Latitude: The latitude value of the venue.
- Longitude: The longitude value of the venue.

From Zomato API (<https://developers.zomato.com/api>), we will retrieve the following for each venue:

- Name: The name of the venue.
- Address: The complete address of the venue.
- Rating: The ratings as provided by many users.
- Price range: The price range the venue belongs to as defined by Zomato.
- Price for two: The average cost for two people dining at the place.
- Latitude: The latitude value of the venue.
- Longitude: The longitude value of the venue.