



# Data Science Project

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## Introduction

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Bangalore city of India is place of wide variety of restaurants. The motive of this analysis is to find a suitable location to start a new restaurant which can get more attention of the people and there are less competitors and to provide a solution for anyone looking to open an Italian restaurant

The Goal of this is to find a location that suits the below criteria.

- Having many restaurants in the vicinity (Chinese, Intercontinental, Indian)
- Having no or few Italian cuisine restaurants, as this will ensure that there very little competition with other competitors.

## DATA

The data that will be used in this project is a csv file having data related to all neighborhoods in the city of Bangalore

## METHODOLOGY

The Finding of a suitable location for a restaurant to flourish is an important

We explore the neighborhoods using Foursquare API to find the venues within 500 meters of each neighborhood.

This data (Foursquare Venues) obtained will be merged with the initial dataset (Latitude and Longitude data at a location) and clustering will be done on the merged data.

The Foursquare API that will be used to explore the neighborhoods is <https://api.foursquare.com/v2/venues/explore>.

This API returns json response which will be transformed into a Data Frame, taking only the required details into consideration.

[https://github.com/myrondza/Coursera\\_Capstone/tree/master](https://github.com/myrondza/Coursera_Capstone/tree/master)

K-Means Clustering: The data points are clustered into 4 clusters using K-Means algorithm.

The goal of this algorithm is to find groups in the data, with the number of groups represented by the variable K. The algorithm works iteratively to assign each data point to one of K groups based on the features that are provided.

## RESULTS

By exploring the requirements we found only two neighborhoods that match the requirements (Many restaurants in the vicinity & only a few Italian (European) restaurants)