# Recommendation of location for an Indian restaurant in Melbourne

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### 1. Introduction

### 1.1 Background:

Finding a suitable location for food business in a metropolitan city like Melbourne can be challenging. Looking at the variety and number of Indian restaurants in the city, it is vital that aspects such as location, cuisine and parking are considered carefully. Similarly, it is important to analyse the type of restaurants and population in that area. For example, considering the owner is interested in opening an Indian restaurant, the location should be selected where there is less competition and more scope for the business. This project aims only in northern suburbs of Melbourne.

#### 1.2 Problem

Data that might be contributing in determining the best recommendations for a restaurant is number of restaurants in the area, type of restaurants and venues. This project aims to suggest most suitable location for opening a restaurant in Melbourne Northern suburbs.

#### 1.3 Interest

Restaurant owners and partners would be undoubtedly interested in finding the apt site for opening their restaurant in Melbourne.

# 2. Data acquisition and cleaning

# 2.1 Data sources

To begin with, location data is based on the suburbs in Melbourne and postcodes. After carefully reviewing number of websites, the website <a href="https://postcodes-australia.com/state-postcodes/vic">https://postcodes-australia.com/state-postcodes/vic</a> seemed right for scrapping.

In addition to Victorian suburbs and postcodes, Indian population in the suburb locations was also needed to determine the ideal location for restaurant. This data was hard to find, finally I extracted a survey report published in 2016

https://www.multicultural.vic.gov.au/images/2016 Census/CommunityProfiles2016/India-Community-Profile-2016-Census.pdf , which had a list of top locations where most Indians are located

# 2.2 Data cleaning

Data obtained from postcodes-australia.com is a list of 100s of locations. List is scrapped from the website and stored in tabular form or a Data frame. Multiple locations were registered for a single postcode, for example, for postcode 3036 there were two locations. For simplicity purposes, it was reduced to one location.

For demographic details for Indians in suburbs multicultural.vic.gov.au is scrapped. It is pdf file. To scrape table from pdf file "tabula" is used to convert it to ".csv" file and table was read using "read\_csv".

### 2.3 Feature selection

As the scope of this project only focuses on Northern suburbs of Melbourne, locations that are based in postcodes between 3000 and 3100 are only considered. This alone will fetch us 89 different locations to study and further analyse.

```
df = pd.DataFrame(sublist)
df.shape

Out[3]: (89, 2)
```

Demographic data obtained from the table also had multiple locations under one suburb. From this table, top 20 locations with most Indian population is extracted. The goal of the project is to now predict the location with no or least number of Indian restaurants with maximum Indian population in the vicinity.

	Place
0	Tarneit
1	PointCook
2	Truganina
3	HoppersCrossing
4	WyndhamVale
5	HamptonPark
6	CranbourneEast
7	Berwick
8	NarreWarrenSouth
9	CranbourneNorth
10	NoblePark
11	Dandenong
12	Springvale(Vic.)
13	Keysborough
14	DandenongNorth
15	Epping(Vic.)
16	Wollert
17	SouthMorang
18	Lalor
19	Thomastown