Explore India
Business Opportunities

Business Opportunities in India

- What are the trending businesses across Indian state capitals?

- What are the trending businesses across Indian cities?

- Does population of a state capital or city influence the business trends?

- Should I start a business in a state capital or any cities in India?

- Which category of business should I consider?
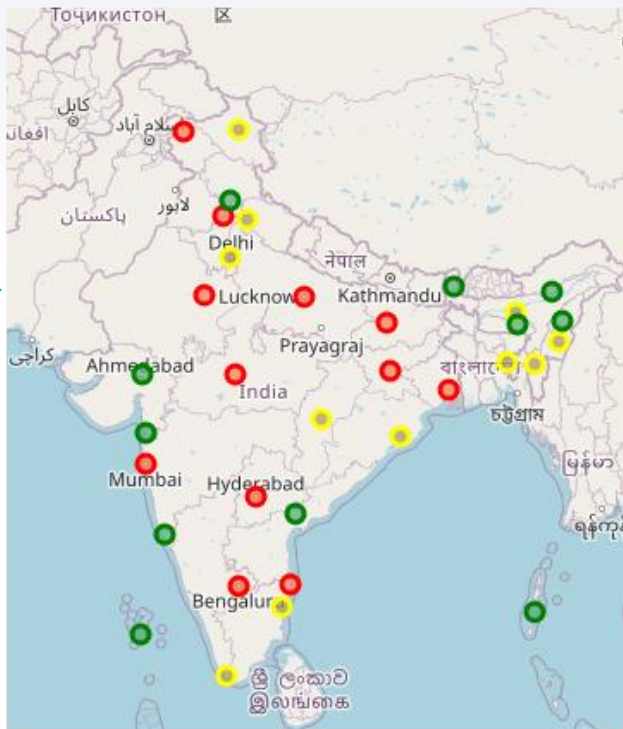
1

Data Collection and Analysis

- Indian State Capitals Data – <u>List of state and union territory capitals in India</u>

- Indian Cities Data – <u>List of cities in India by population</u>

- Location data from Python geopy module

- Venue data from <u>foursquare.com</u>

- Indian States, Capitals/Cities, Latitude, Longitude, Population and Venue data only were considered.

2

Population Data Analysis

3

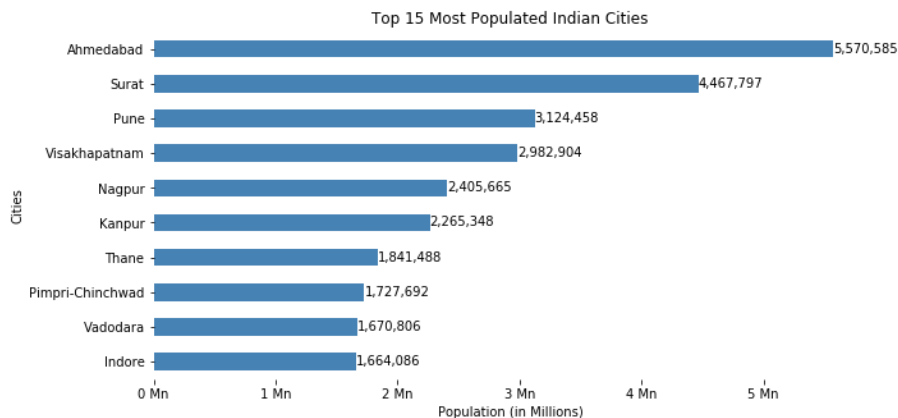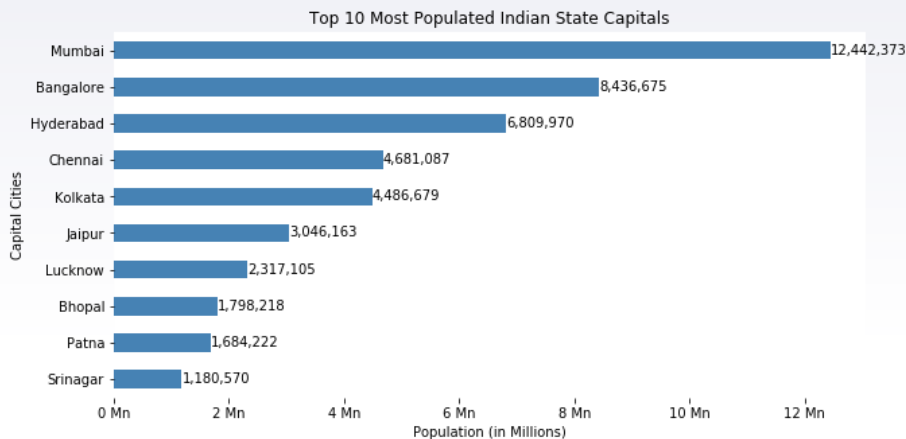### Indian State Capitals - Population

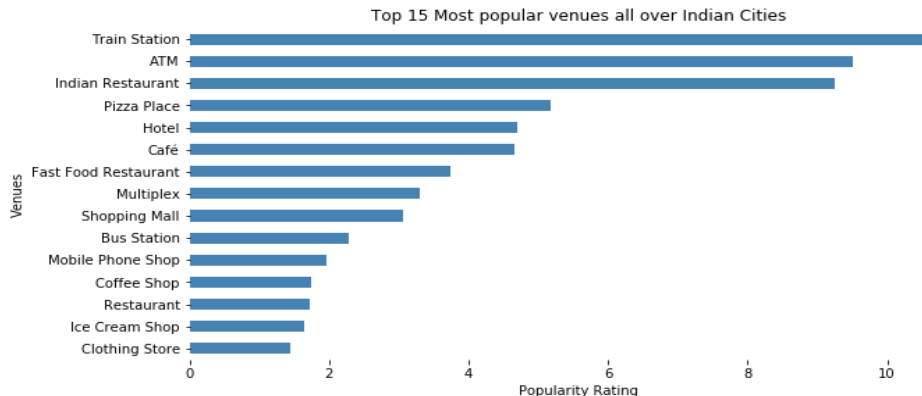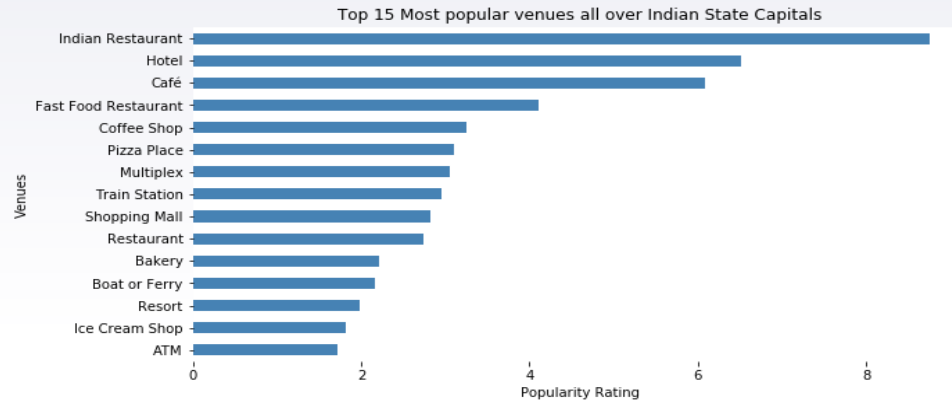

Inidan Cities - Population

- State Capitals show constant trend on population across India, mostly highly populated
- Indian Cities show mixed trend on population across India
- Population dataset is categorized as High (Red), Medium (Yellow) and Low (Green) with 34%, 33%, 33% splits respectively.

Population Data Analysis

Top 10 Most Populated Indian State Capitals

Capital Cities	Population (in Millions)
Mumbai	12,442,373
Bangalore	8,436,675
Hyderabad	6,809,970
Chennai	4,681,087
Kolkata	4,486,679
Jaipur	3,046,163
Lucknow	2,317,105
Bhopal	1,798,218
Patna	1,684,222
Srinagar	1,180,570

Top 15 Most Populated Indian Cities

Cities	Population (in Millions)
Ahmedabad	5,570,585
Surat	4,467,797
Pune	3,124,458
Visakhapatnam	2,982,904
Nagpur	2,405,665
Kanpur	2,265,348
Thane	1,841,488
Pimpri-Chinchwad	1,727,692
Vadodara	1,670,806
Indore	1,664,086

4

- Top most populated Indian State Capitals show that the highest populated cities are also the most popular cities of India

- Top most populated Indian cities show that the highest populated cities are also most popular business hub on different categories

- Though there are little differences in population count, both Indian state capitals and cities don't differ too much in population data.
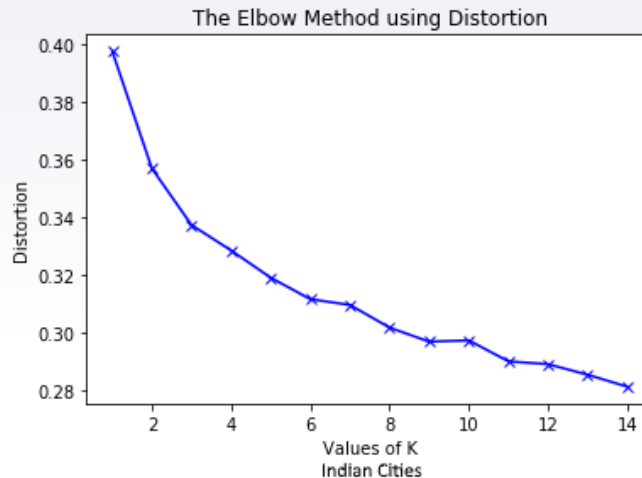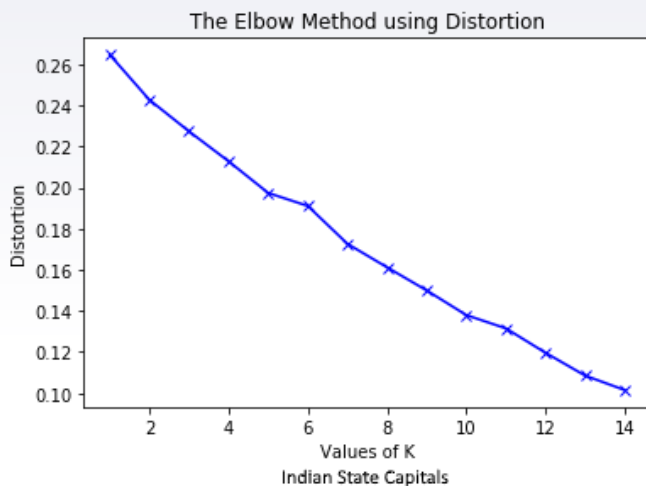
Venue Data Analysis

Top 15 Most popular venues all over Indian State Capitals

Top 15 Most popular venues all over Indian Cities

- Top 15 most popular venues all over Indian state capitals shows "Indian Restaurant, Hotel and Cafe" venues leads the ranking in top 3

- Though it is little different in Indian cities, the first commercial venue in top 15 of Indian cities list shows "Indian Restaurant, Pizza Place and Hotel" followed by Café in 4th place.

- Considering the top list, venue data show Indian Restaurants, Hotel and Café are common popular venues across Indian cities and state capitals

5

K-Means Clustering

The Elbow Method using Distortion — Indian State Capitals

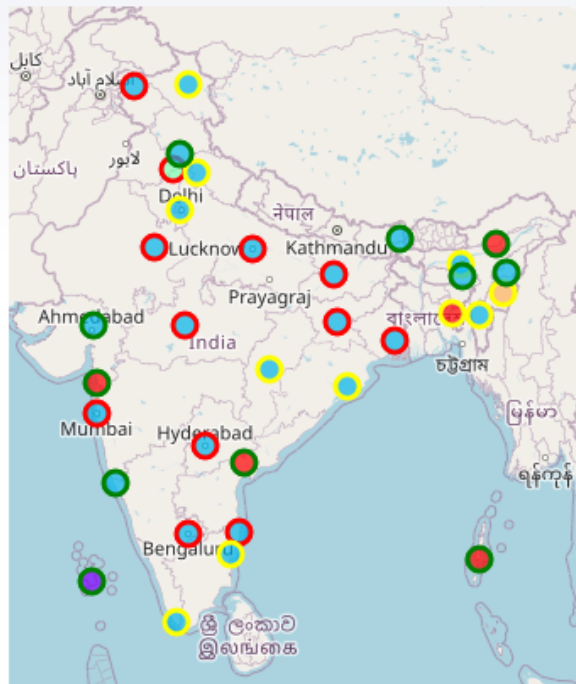The Elbow Method using Distortion — Indian Cities

- The venue data set has been grouped by frequency of venue occurrences.

- Top 10 most popular venues for each Indian city and state capitals were identified.

- K-means clustering algorithm was used and the K value for the algorithm was found using Elbow method

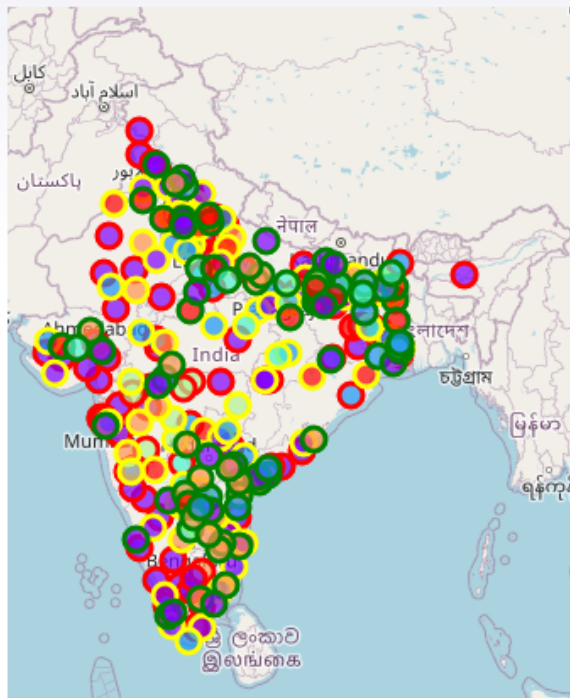- Optimal K value for Indian state capitals dataset was 5 and Indian Cities dataset was 6

6

Venues vs Population Analysis

Venues Clustered - Indian State Capitals

Venues Clustered - Indian Cities

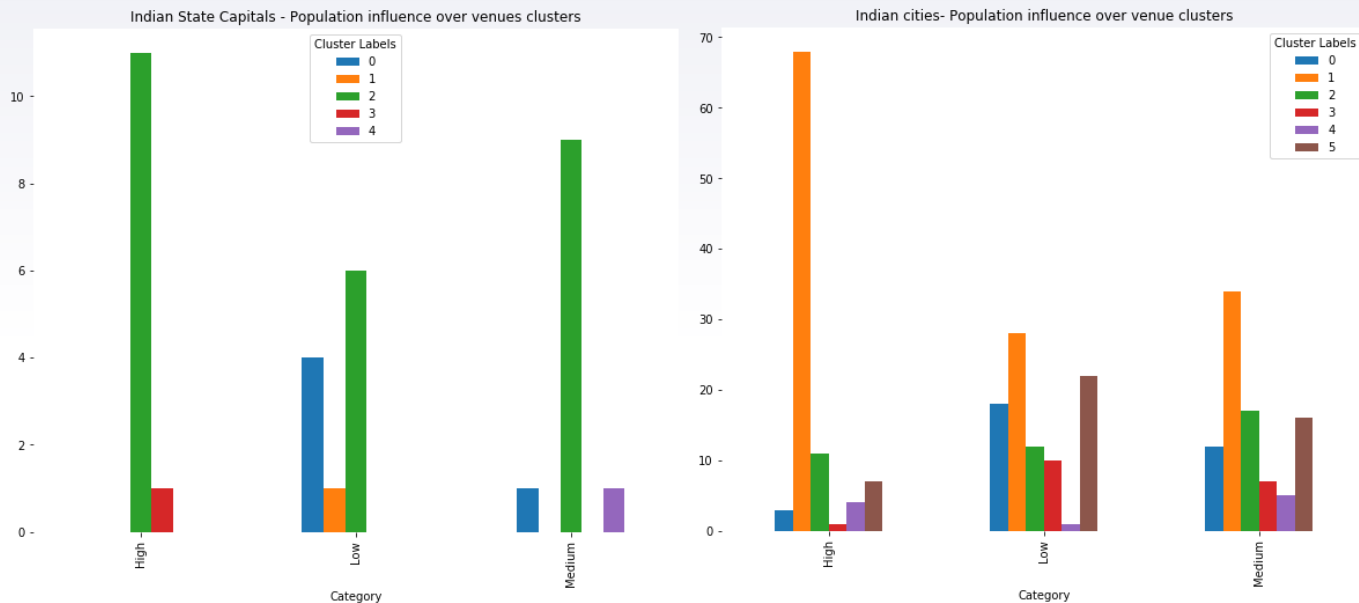*Borders of the markers indicate population category of the city*

- Indian State Capital map shows mostly similar venue categories across India
- Indian Cities map shows mixed venue categories across India
- Due to too many data points on Indian Cities map, its hard to conclude with this view.

7

Venues vs Population Analysis

8

Indian State Capitals - Population influence over venues clusters

Indian cities- Population influence over venue clusters

- The graph clearly shows cluster label 2 of Indian state capital is more common across all population categories.
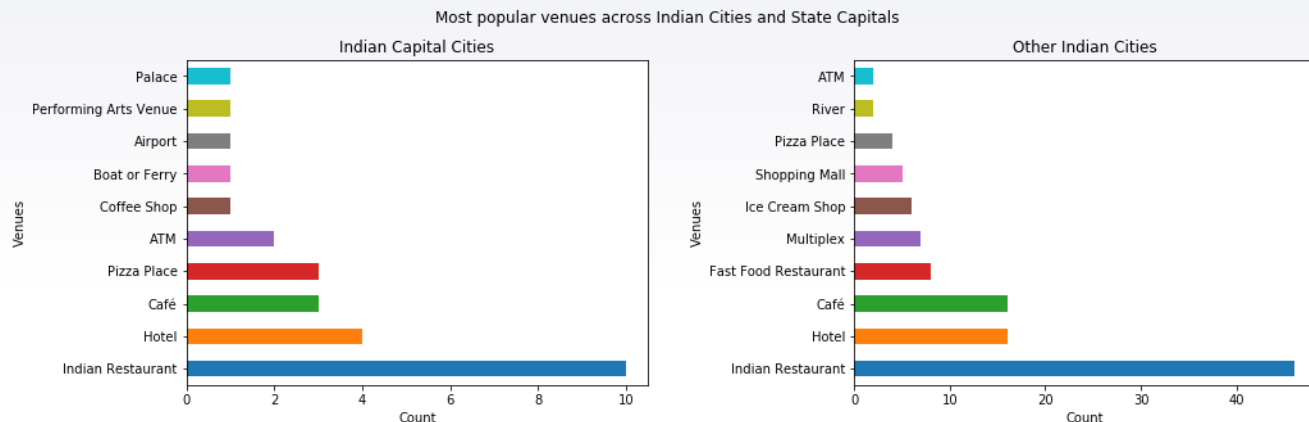
- The graph clearly shows cluster label 1 of Indian state capital is more common across all population categories.

- Population has no much influence over venues of a city or a state capital.
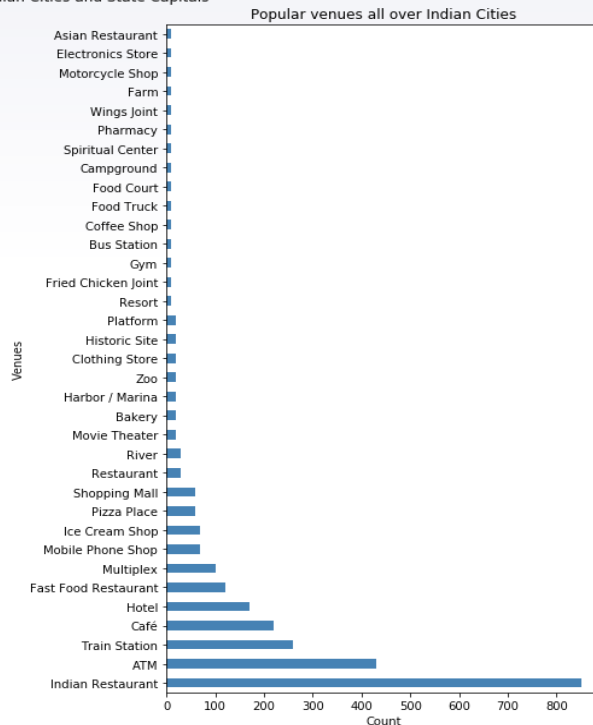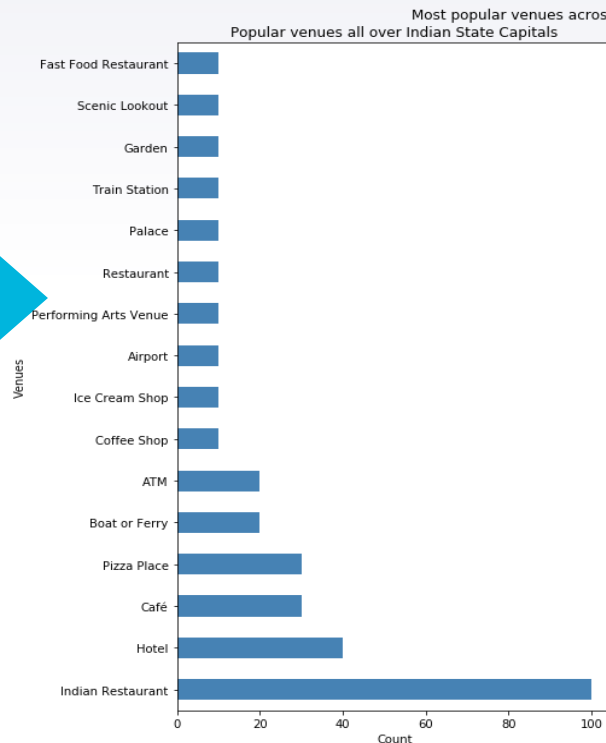
Battle of Capitals and Cities

Most popular venues across Indian Cities and State Capitals

- Between Capitals and Cities – It's a tie

- Top 3 of 1st most popular venues across Indian Capital Cities and other Cities both leads with

  - Indian Restaurant

  - Hotel

  - Café

9

Battle of Capitals and Cities

Most popular venues across Indian Cities and State Capitals

- It is still a tie between Capitals and Cities

- Frequency of venues after combining all top 10 venues of all cities of each dataset shows

  - Indian Restaurant leads as usual

  - Hotels and Café are still in top commercially

10

Conclusion

Indian Restaurant, Hotel, Café are the most popular venues across India regardless of population, status of the cities. The best option to start a business could possibly be one of these top 3 categories. However, rest of the venues are not to be left out, comparing the venues across both data sets, it clearly indicates that there are more travelling people across cities, so business targeting travelling people also will work.

11

So the facts identified for Business startups in India are,

- Business under "Indian Restaurant, Hotel, Café" category, be it capital city or other cities

- Population doesn't have much impact on these top venues

- Business close to Train stations, Airports

- Business which deals with travelling people