

Opening a Hostel around Jaipur District, Rajasthan, India

IBM Applied Data Science Capstone Project

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Introduction

- ◆ In today's time, the education field is growing exponentially and in that too there seems to be competition as to who is the best. In this competition, the students/professors find it hard as to which they should join. When this decision is over, a big yet important factor arises that is where to live and how to manage for it within certain conditions. Many institutes provide their facilities for it nowadays where most of the essentials are being done.
- ◆ As for the other institutes, people have to search for accommodation within their taste and budget. This arises the need for hostels which include accommodation to live with various facilities included as well as food mess in it which depends upon the owner owning the hostel.

Introduction (Continued)

- ◆ In such a populous city/district/capital there occur need for hostels for students/teachers such that they can live like home, away from their homes and most of their demand is to take the one with best possible location such that they have access to most daily essentials and entertainment places to visit.

Problem (to be solved)

- ◆ So, our problem would be to search for the best place in Jaipur district (which includes many cities other than Jaipur) to build a Hostel which could cover maximum possible cities near it such that more people could access to it which would definitely benefit everyone. The **target audience** is all the people who are in search for Hostels for accommodation in best location, peoples who want to buy and open one at a best possible location and someone who wants to work or provide work to a hostel for income purpose.

Data (how to use)

- ◆ Data containing Pin Codes, latitude, longitude and other stuff of India was being taken and used from Kaggle (<https://www.kaggle.com/n1sarg/indian-postal-codes>). This data is then modified manually and useful information related to only Jaipur district was being extracted to be used for the project. It would be then be cleared and a Data Frame which include all the useful information which we require will be made using pandas and other libraries.

Methodology

- ◆ After data was cleared and shortened according to our need, foursquare API was used to get data on nearby venues.
- ◆ By applying various data science techniques and with the help of foursquare API a new dataframe was formed.
- ◆ This was used to form and judge the clusters.
- ◆ Clusters was then visualized on map for the conclusion to be obtain as to which location will be best where there is less impact due to competetion and more number of nearby venues.

Result and Conclusion

- ◆ All the clusters formed are great locations for hostel to be built according to our requirements.
- ◆ Most of the hostels are already available in cluster 0 so opening a new one their does not impact much and thus it will be a bad idea.
- ◆ In cluster 2, there is less number of hostels so it could be a good choice to make a new one but before coming to conclusion if take a look at cluster - 1, it is surprisingly great for our conditions to meet as it contains little to NO hostels and has a great location too.
- ◆ So, Cluster 1 is definitely the best choice to be picked among the three for a hostel to be built.