

Introduction and problem statement

Kathmandu is one of the most popular tourist destinations in the world. Millions of tourists visit the small capital of Nepal every year to witness the culture and nature. For an outsider, information regarding the different places is crucial to make important decisions for food, stay, and travel.

In this project, I have tried to cluster several neighborhoods of Kathmandu so that each cluster is suitable for some common purpose. This information can be provided to tourists to help them in decision making.

Foursquare API will be used to explore the neighborhoods and obtain the most popular places in each neighborhood. Then, a cluster analysis (K-means analysis) will be performed to group the neighborhood.

Data Description

Since there is no government information on the classification of neighborhoods, I will be first creating a list of popular neighborhoods. I will also create lists of their latitude and longitude and combine all the lists into a single pandas data frame.

As mentioned earlier, the foursquare API will provide me with the places exploration information

Adequate preprocessing of datasets will be performed to obtain clean data for analysis. Unnecessary columns will be dropped, na values will be ignored and rows will be deleted.

While performing K-Means clustering, I will use the Sillhouette Method to find the best k value for the clustering.