The Battle of Neighbourhoods: A tale of three ancient capitals

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Introduction

Nepal is a developing country which is much reliant on the means of tourism. Before the unification of Nepal, Kathmandu, Bhaktapur and Lalitpur were the most prominent places in Nepal. Each one has their own separate allure to it. These can be seen in its tradition and culture.

The three places are quite the popular tourist and vacation destinations for people all around the world. They are diverse and multicultural and offer a wide variety of experiences that are widely sought after. We try to group the neighbourhoods respectively and draw insights to what they look like now. We try to compare and contrast the areas of interest in each place and find its diversity.
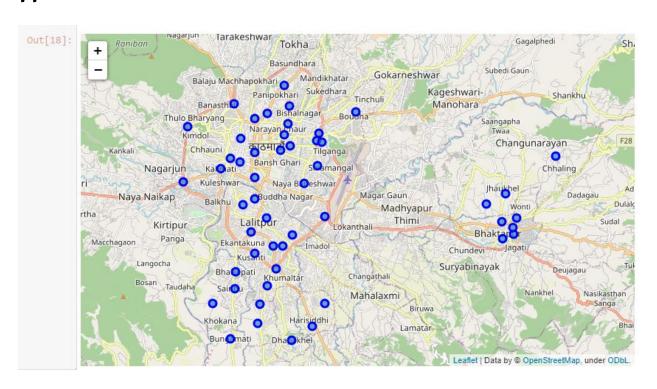
Problem

The aim is to help tourists choose their destinations depending on the experiences that the neighbourhoods have to offer and what they would want to have. This also helps people make decisions if they are thinking of creating any area of interest or business or even if they want to relocate neighbourhoods within the city. Our findings will help stakeholders make informed decisions and address any concerns they have including the different kinds of cuisines, provision stores and what the city has to offer.
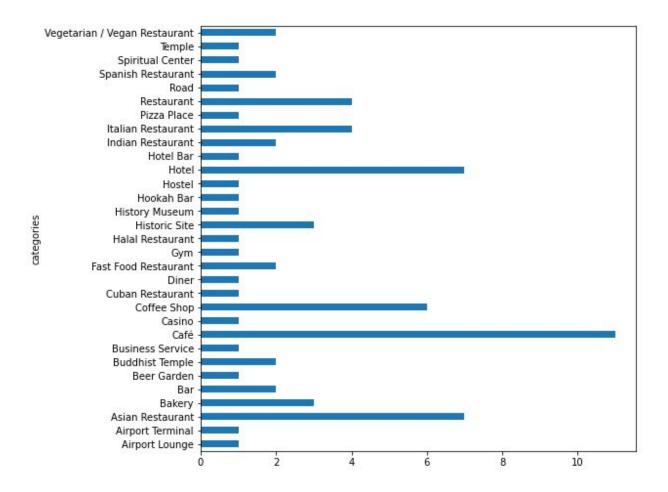
Data cleaning

To help improve data quality, .isnull() and isna() were seen to be present using .sum(). TO remove the error .dropna() and replace("",0)

is used to replace any extra space with zero.

Commands like .shape(), .info() and .describe() are consistently used to check for any data type issue.
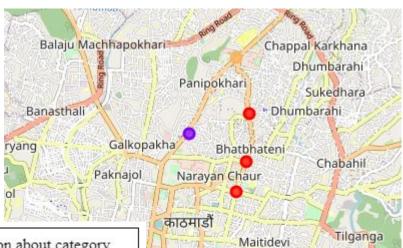
Ward Office

Kathmandu

Neighbourhood	Neighbourhood Latitude	Neighbourhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Baluwatar,	8	8	8	8	8	8
Bhimsengola	5	5	5	5	5	5
Bhimsenthan	17	17	17	17	17	17
Bouddha	20	20	20	20	20	20
Chhetrapati	28	28	28	28	28	28
Dillibazar	10	10	10	10	10	10
Gaushala	4	4	4	4	4	4
Gyaneshwor	4	4	4	4	4	4
Jayabageshwori	8	8	8	8	8	8
Kalanki	4	4	4	4	4	4
Kalimati	5	5	5	5	5	5
Koteshwor	3	3	3	3	3	3
Lainchaur	33	33	33	33	33	33
Lazimpat	23	23	23	23	23	23
Maharajgunj	3	3	3	3	3	3
Mitrapark	5	5	5	5	5	5
Naxal	7	7	7	7	7	7
New Baneshwor	3	3	3	3	3	3
Om Bahal	19	19	19	19	19	19
Purano Buspark	13	13	13	13	13	13
Sohrakhutte	1	1	1	1	1	1
Swayambhu	6	6	6	6	6	6
Tangal	20	20	20	20	20	20
Tripureshwor	12	12	12	12	12	12

Cluster Label	Cluster color	Description about category
0	red	High diversity
1	purple	Medium diversity
4	pink	Low diversity
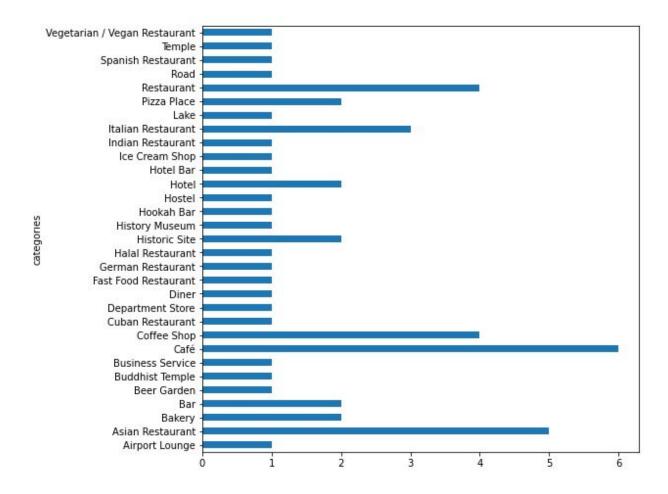
Lalitpur

Neighbourhood	Neighbourhood Latitude	Neighbourhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Jawalakhel	36	36	36	36	36	36
Kanibahal	4	4	4	4	4	4
Lagankhel	4	4	4	4	4	4
Pulchowk	11	11	11	11	11	11
Sanepa	11	11	11	11	11	11
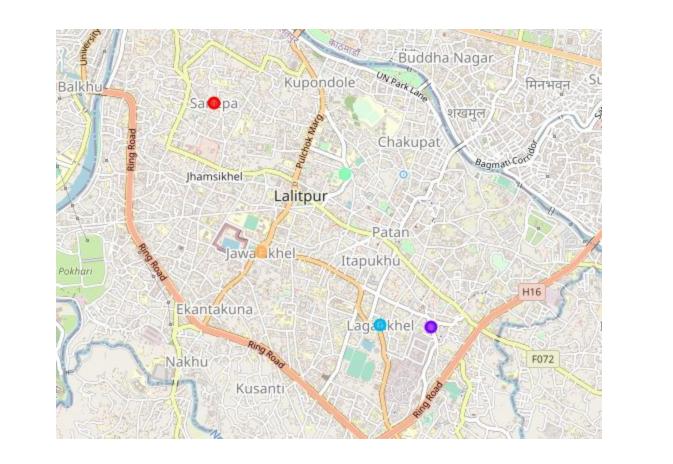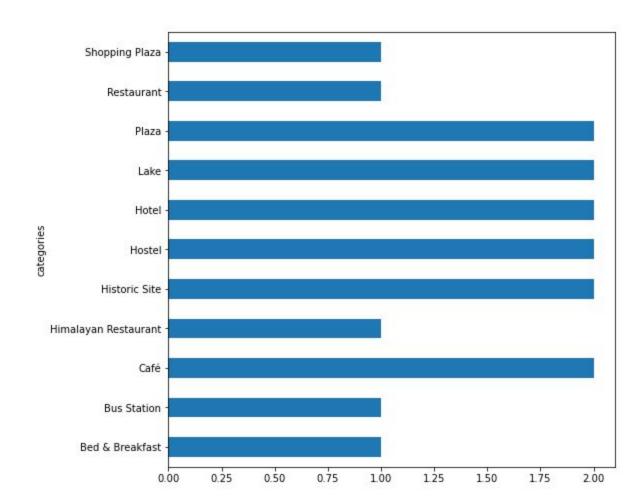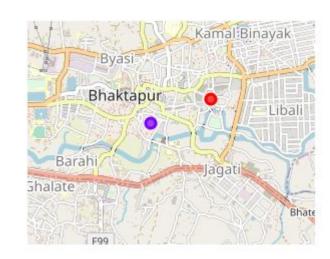
Cluster label	Cluster color	description
0	red	Mix of restaurant and sports Medium diversity
1	turquoise	High diversity Restaurant based
2	purple	Restaurant based Low population density
3	Light blue	Restaurant based Low population density
4	orange	High diversity Low population density Restaurant based

	Neighbourhood	Ward	City	latitude	longitude	Population Density (per sq km)	Coordinates	Cluster Labels	1st Most Common Venue	2nd Most Common Venue
3	Rammandir road	Ward 5	Bhaktapur	27.669910	85.430347	6425	(27.66991041, 85.43034742)	1	Plaza	Hostel
4	Incho - hanumanghat road	Ward 6	Bhaktapur	27.671735	85.435497	7212	(27.67173475, 85.43549726)	0	Restaurant	Market

Most populated

	Neighbourhood	Ward	City	latitude	longitude	Population Density (per sq km)	Coordinates
9	Kanibahal	Ward 6, 7 and 8	Lalitpur	27.666727	85.328007	89212	(27.6667273, 85.3280068)
14	Tangal	Ward 5	Kathmandu	27.717231	85.330449	23263	(27.7172307, 85.3304488)
5	Sanepa	Ward 2	Lalitpur	27.683772	85.309353	17148	(27.6837719, 85.309353)
11	Lazimpat	Ward 2	Kathmandu	27.721508	85.320765	16438	(27.7215082, 85.3207646)
13	Baluwatar,	Ward 4	Kathmandu	27.724603	85.331017	14139	(27.7246028, 85.3310167)

Limitation

1. The data are incorrectly input lowering data quality

2. Most of the actual data in bhaktapur have not been entered as there is not consciousness or awareness about it

3. Limited interaction with foursquare API as given for a free account.

Limitations

In retrospect of the whole project, There are areas where the process can be improved like using borders instead of ranges. The API being fully integrated with the governmental database to give the correct and exact information. But in all this project would serve as a base project for realtors, business owners, migrating population, tourists and government administration.

References

1. https://bhaktapurmun.gov.np/en/ward-profile

2. https://lalitpurmun.gov.np/en/ward-profile

3. https://old.kathmandu.gov.np/en/ward-profile

4. https://github.com/unknown095/IDS-projects/blob/main/Book%20(1).csv

5. Geocoder library

6. Google map

7. Foursquare API.