

Prime location in Lucknow, India for Real Estate investments

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Introduction:

A Real Estate investor Mr. XYZ from Mumbai, India has decided to expand his business in other parts of country. His business is to Buy, Renovate and Sell Real Estate properties. He decided to expand his business in Lucknow, the capital of UP, India. Since this is a new location for him, he decided to take help from professional data scientist to explore the prime location for Real Estate Investment in Lucknow.

Business Problem:

The task is to locate the hotspot for Real Estate investment in Lucknow, India. Selection of location should be based on its nearby venues.

Audience:

Mr. XYZ from Mumbai, India is stakeholder who want to expand his business to new place. Before investing, Mr. XYZ want to explore the neighborhood and would be sure that his investment is profitable.

Data Section:

1. Postal code data with coordinates

Source: IN.zip file from <http://www.geonames.org/export/zip/>

2. FourSquare API to explore the location
3. Folium API to visualize result on map
4. Data collection for different Blogs and Real Estate Websites

Methodology:

Homes that are closer to the School, Hospital, Restaurant, Clubs, Gym, Airport, Bus transport, etc are sell at a higher price and having more demand than others. The majority of people want to live close to where they work, shop and go out to enjoy themselves.

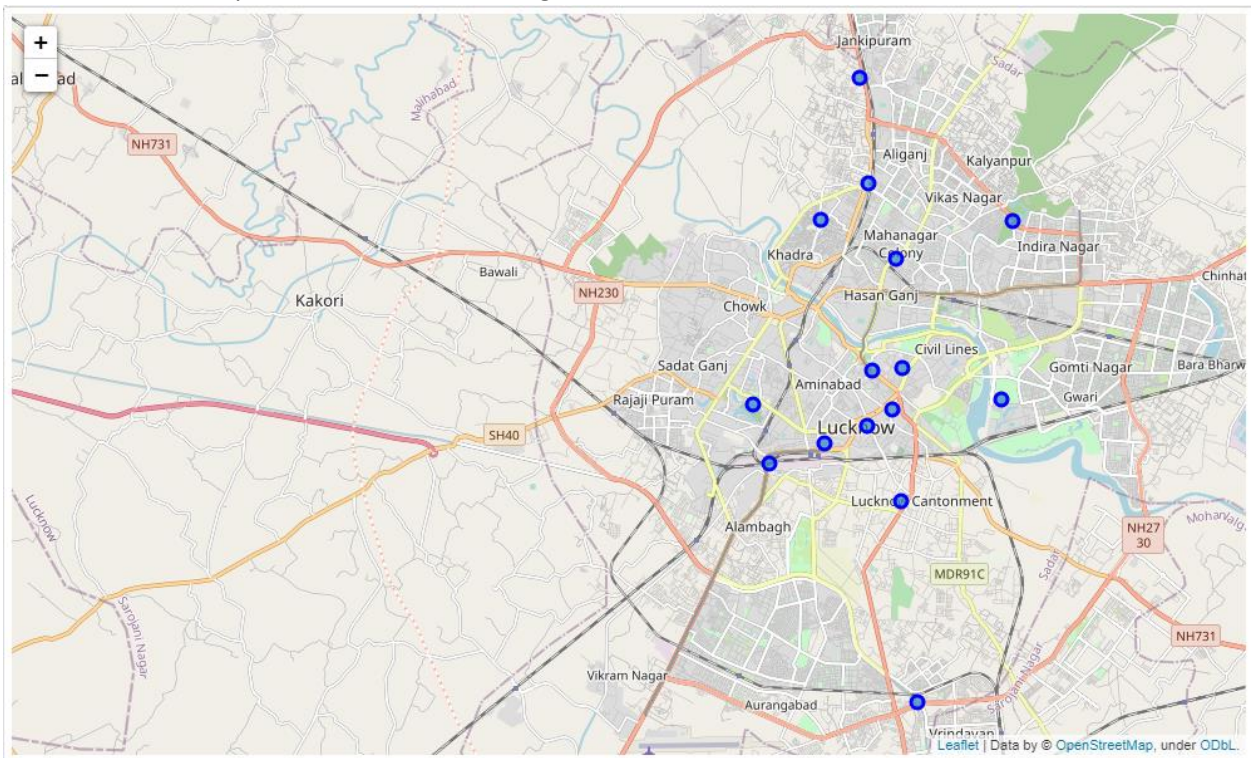
So, we will explore the neighborhood by its nearby venues. For the same purpose, We will use FourSquare API to explore the venues for each neighborhood.

Analysis:

1. Load data from IN.txt file.
2. Did some web search and identified some location for Real Estate investment. Sample list as below

	Neighborhood	Latitude	Longitude
0	Gomti Nagar	26.844857	80.974458
1	Hazratganj	26.852021	80.939195
2	Mahanagar	26.879082	80.945452
3	Amar Shaheed Path	26.771042	80.951219
4	Indira Nagar	26.888393	80.977364

3. Plot location on map for better understanding.



4. In order to explore nearby venues of neighborhood, we used FourSquare API.
5. We combined the data from all point of interest and removed the duplicate records, if any.
6. After cleaning data, we group it to identify 3 most promising location for real estate investment.
7. The top three location are as below

	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Neighborhood						
Mahanagar	8	8	8	8	8	8
Hazratganj	7	7	7	7	7	7
Governer House	6	6	6	6	6	6
AP Sen Road	4	4	4	4	4	4
Mall avenue	3	3	3	3	3	3
Rajendra Nagar	3	3	3	3	3	3
Aliganj	2	2	2	2	2	2
Cantonment area	2	2	2	2	2	2
Gomti Nagar	2	2	2	2	2	2
Amar Shaheed Path	1	1	1	1	1	1
Charbagh	1	1	1	1	1	1

8. Below is the list of top 10 places for each location

Cluster Labels	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	
8	1	Mahanagar	Pool Hall	Pizza Place	Park	Bar	Indie Movie Theater	IT Services	Bookstore	Fast Food Restaurant	Train Station	Coffee Shop

Cluster Labels	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	
7	1	Hazratganj	Indian Restaurant	Bed & Breakfast	Coffee Shop	Food Truck	Train Station	Fast Food Restaurant	Asian Restaurant	Bakery	Bar	Boat or Ferry

Cluster Labels	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	
6	1	Governer House	Café	Shopping Mall	Bakery	Pizza Place	Indian Restaurant	Train Station	Fast Food Restaurant	Asian Restaurant	Bar	Bed & Breakfast

Results and Discussion:

In this study, I have analyzed different location of Lucknow city based on nearby venues. Based on analysis, we have identified top three neighborhood for real estate investment. They are as follows:

1. Mahanagar
2. Hazratganj
3. Governer House

As expected, the data was not available in ready-to-use form. I gathered data from different platforms like web search, Real Estate web portals, newspaper, and enquiry from various peoples, etc.

Conclusion:

Mr. XYZ should invest in these there location to maximize his profit.

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