ANALYSING HOUSING PRICES IN METROPOLITIAN AREAS OF INDIA

BACHELOR OF SCIENCE IN MATHEMATICS AND PHYSICS

TEAM ID : NM2023TMID35647

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NAMAKKAL DISTRICT, TAMILNADU.

ANALYSING HOUSING PRICES IN METROPOLITIAN AREAS OF INDIA

1. INTRODUCTION

1.1 OVERVIEW:

House price prediction in a metropolitan city in India is a valuable solution for potential home buyers, real estate agents, and investors. By leveraging historical sales data, property details, and location-specific information, a predictive model can accurately estimate house prices. The model's scalability, real-time updates, user-friendly interface, and transparency ensure it meets the needs of stakeholders. Integration capability, data privacy, and cost effectiveness are also important considerations. By addressing these requirements, the prediction model provides reliable insights, empowering stakeholders to make informed decisions in the fast-paced real estate market.

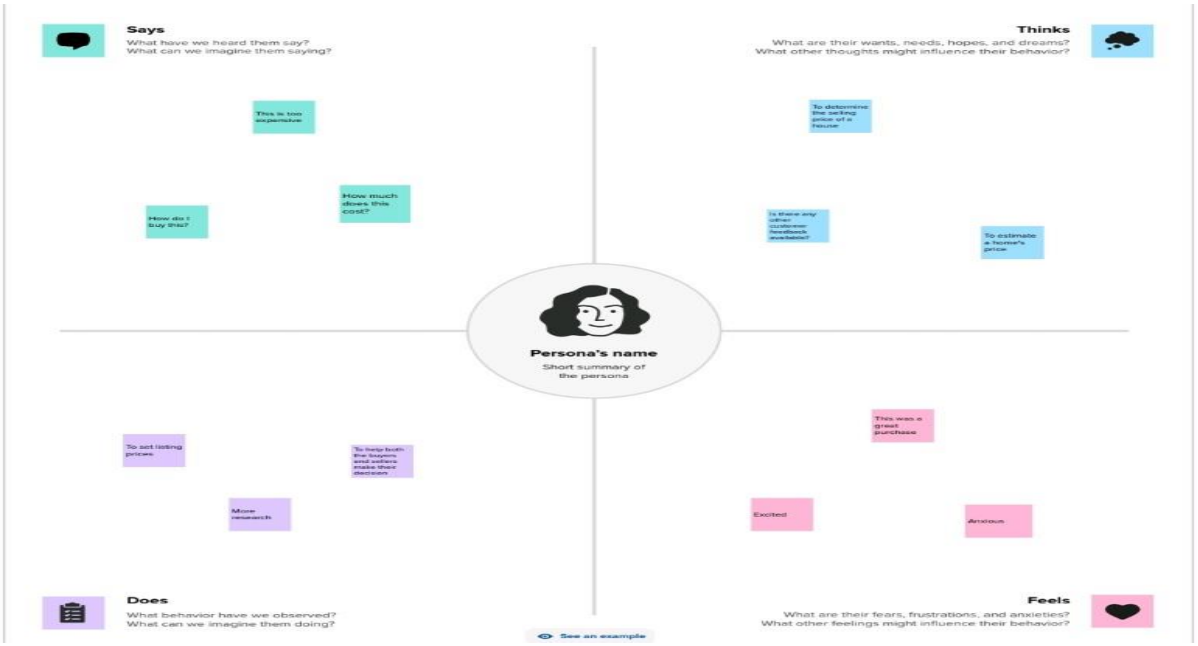
1.2 PURPOSE:

The house price prediction in a metropolitan city in India include developing an accurate prediction model that can estimate property prices. The real estate market in such cities is complex and dynamic, making it challenging for potential home buyers, real estate agents, and investors to accurately estimate property values. The goal is to provide a reliable and accurate prediction tool that assists users in navigating the competitive real estate market and maximizing their returns. The solution should have a user-friendly interface, ensure transparency and explain the ability of predictions, prioritize data privacy and security, and define performance metrics for evaluation.

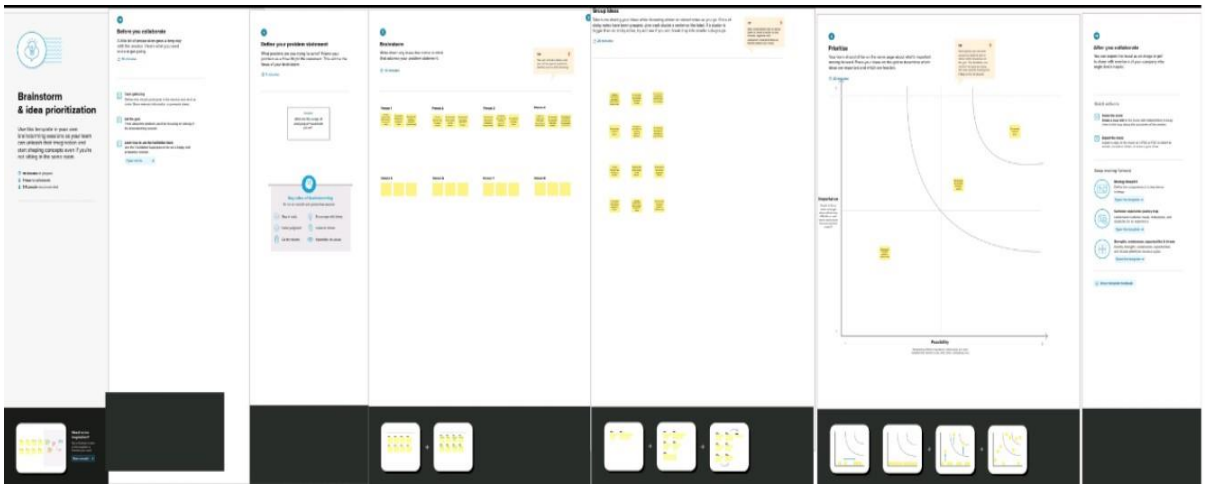
2. PROBLEM DEFINITION AND DESIGN THINKING

The problem at hand is the prediction of house prices in a metropolitan city in India. The requirements for house price prediction in a metropolitan city in India include developing an accurate prediction model that can estimate property prices.

2.1 EMPATHY MAP:

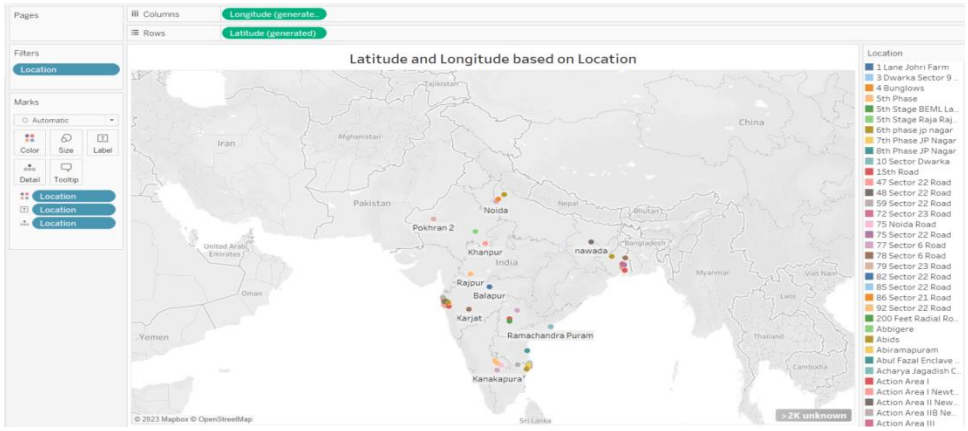


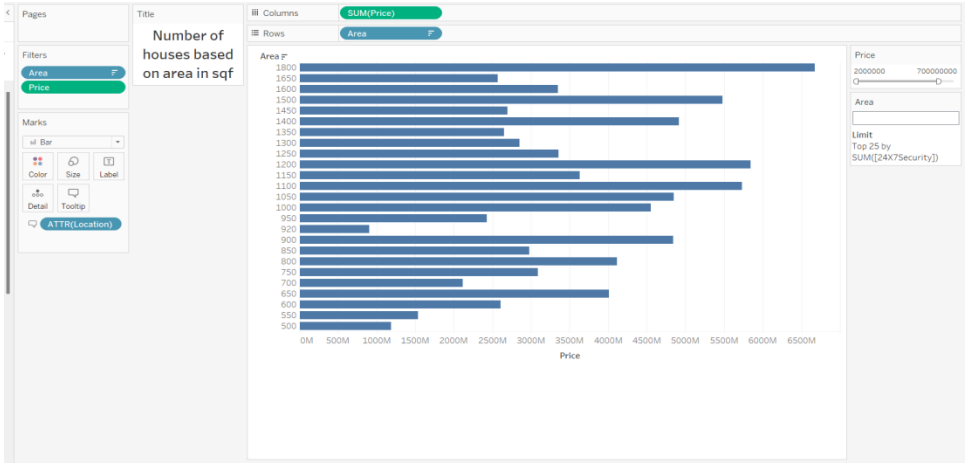
2.2 IDEATION AND BRAINSTORMING MAP :

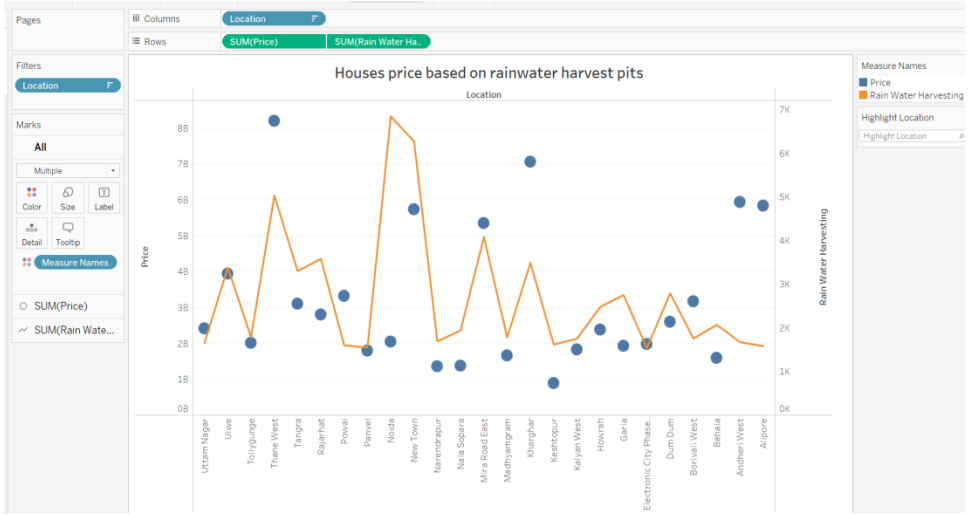


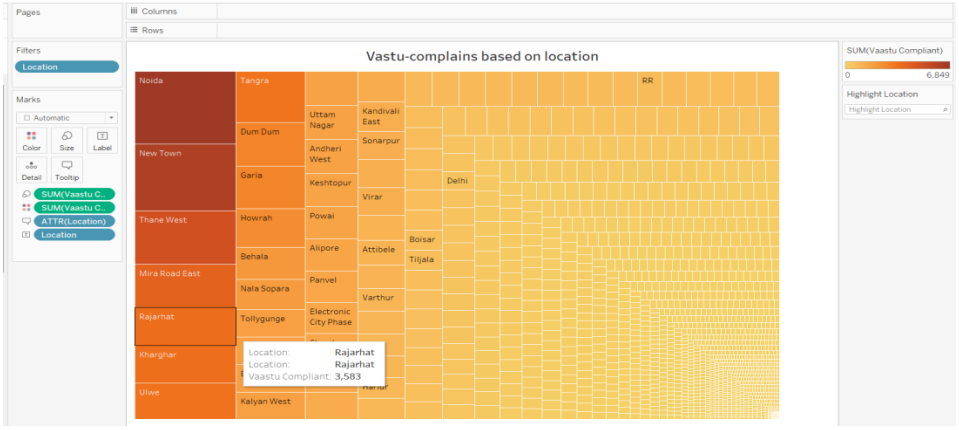
3. RESULT

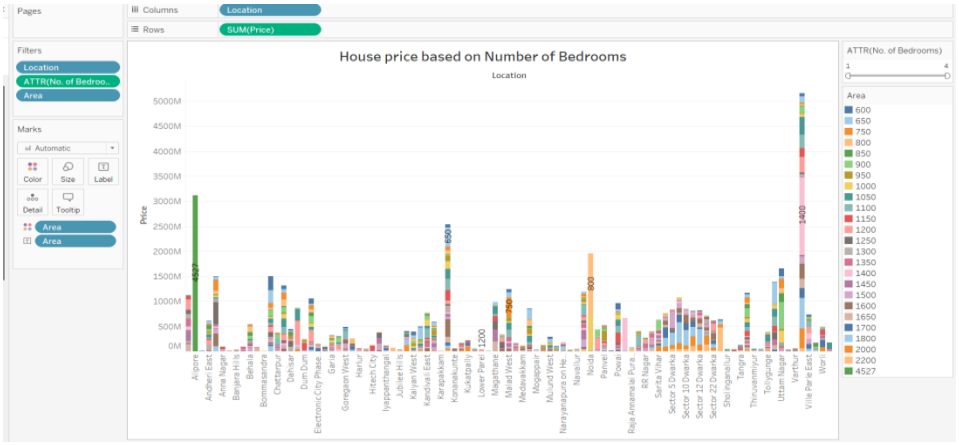
SHEETS:

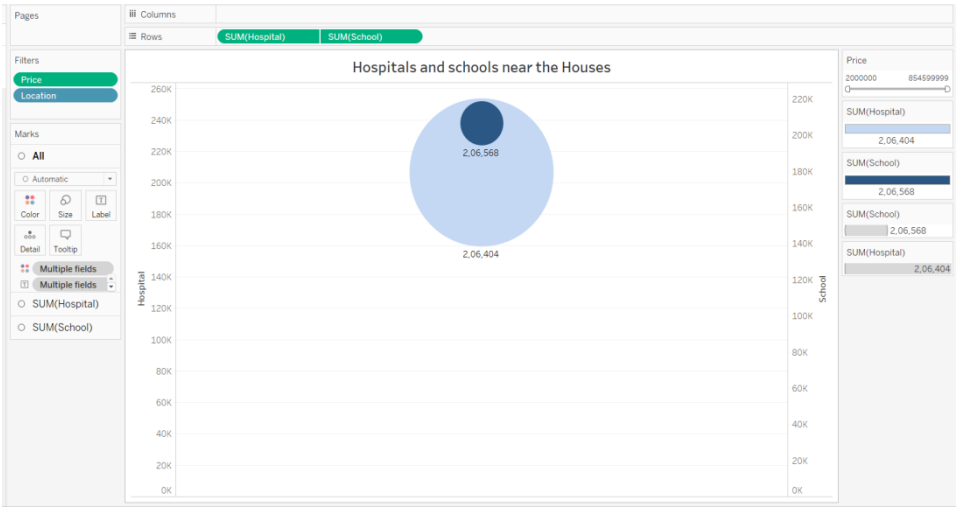


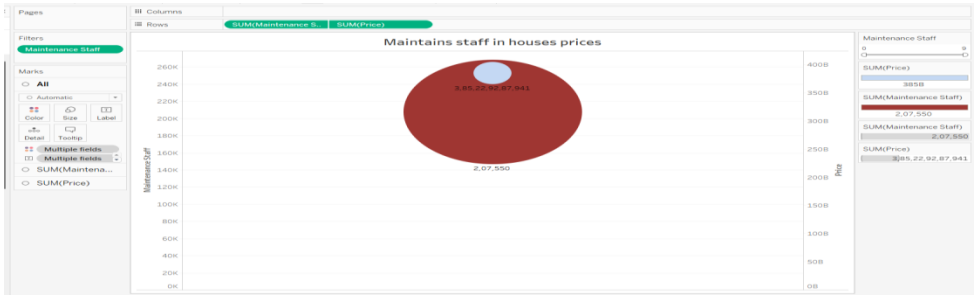




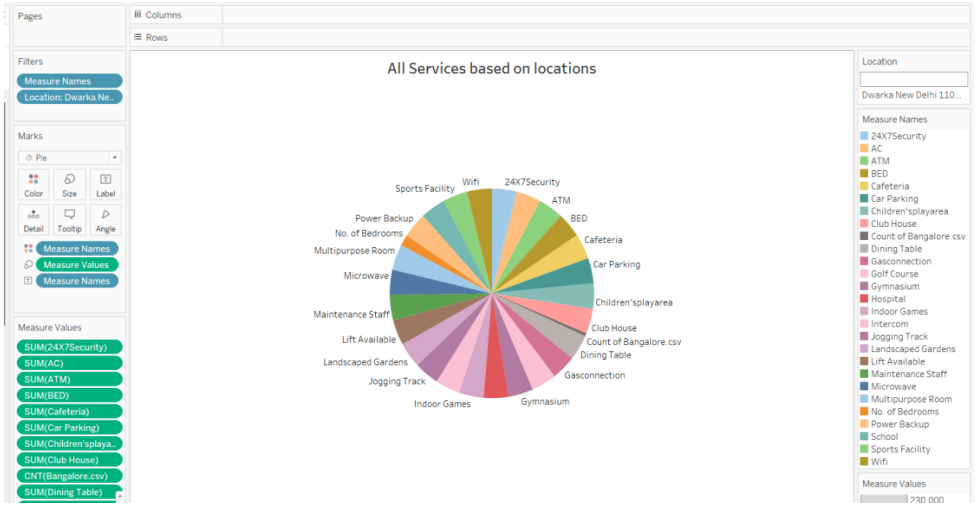

Pages
Columns
Rows
Filters
Location
Marks
Automatic
Color
Size
Label
Detail
Tooltip
SUM(Vaastu C..
SUM(Vaastu C..
ATTR(Location)
Location
Vastu-complains based on location
Noida
Tangra
Dum Dum
New Town
Garia
Thane West
Howrah
Behala
Mira Road East
Nala Sopara
Rajarhat
Tollygunge
Kharghar
Ulwe
Kalyan West
Uttam Nagar
Andheri West
Keshtopur
Powai
Alipore
Panvel
Electronic City Phase
Kandivali East
Sonarpur
Virar
Attibele
Varthur
Boisar
Tiljala
Delhi
RR
Location: Rajarhat
Location: Rajarhat
Vaastu Compliant: 3,583
SUM(Vaastu Compliant)
0
6,849
Highlight Location
Highlight Location


Pages
Columns
Location
Rows
SUM(Price)
Filters
Location
ATTR(No. of Bedroo..
Area
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Area
Area
House price based on Number of Bedrooms
Location
Price
5000M
4500M
4000M
3500M
3000M
2500M
2000M
1500M
1000M
500M
0M
4527
6504
1200
800
1400
Alipore
Andheri East
Anna Nagar
Banjara Hills
Behala
Bommasandra
Chattarpur
Dahisar
Dum Dum
Electronic City Phase
Garia
Goregaon West
Harlur
Hitech City
Iyyappanthangal
Jubilee Hills
Kanjur West
Kanuru East
Karapakkam
Kondapalli
Kukatpally
Lower Parel
Magathane
Malad West
Medavakkam
Mogappair
Mulund West
Narayanapura on He..
Neral Tur
Noida
Panvel
Powai
Raja Annamala Pura..
RR Nagar
Sarita Vihar
Sector 5 Dwarka
Sector 10 Dwarka
Sector 12 Dwarka
Sector 22 Dwarka
Sholinganallur
Tangra
Thiruvemmiyur
Tollygunge
Uttam Nagar
Varthur
Ville Parle East
Worli
ATTR(No. of Bedrooms)
1
4
Area
600
650
750
800
850
900
950
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1600
1650
1700
1800
2000
2200
4527

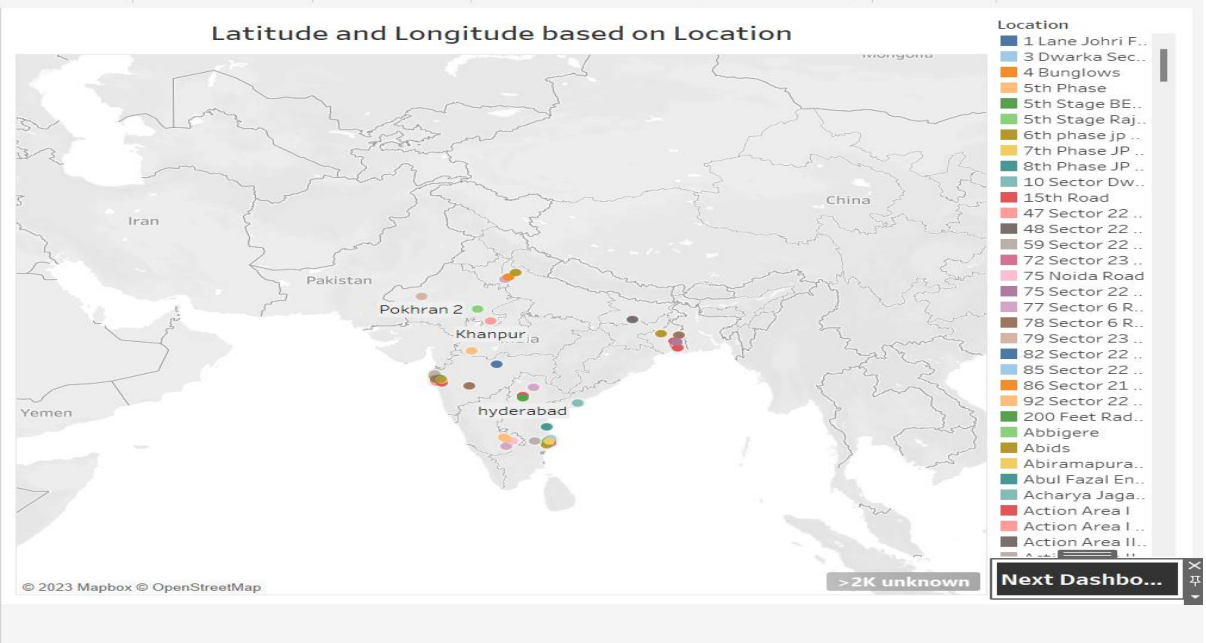

Pages
Columns
Rows
SUM(Hospital)
SUM(School)
Filters
Price
Location
Marks
All
Automatic
Color
Size
Label
Detail
Tooltip
Multiple fields
Multiple fields
SUM(Hospital)
SUM(School)
Hospitals and schools near the Houses
260K
240K
220K
200K
180K
160K
140K
120K
100K
80K
60K
40K
20K
0K
Hospital
School
2,06,568
2,06,404
Price
2000000
854599999
SUM(Hospital)
2,06,404
SUM(School)
2,06,568
SUM(School)
2,06,568
SUM(Hospital)
2,06,404

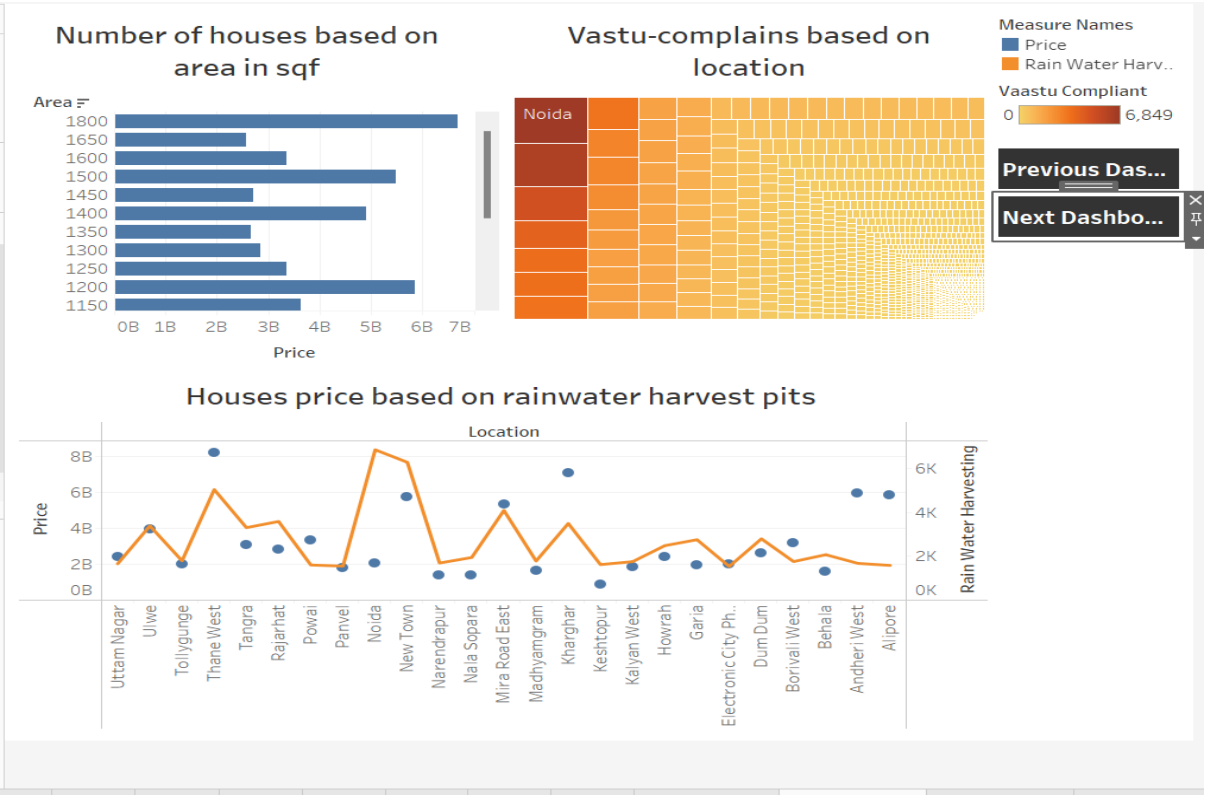

Maintains staff in houses prices
3,85,22,92,87,941
2,07,550

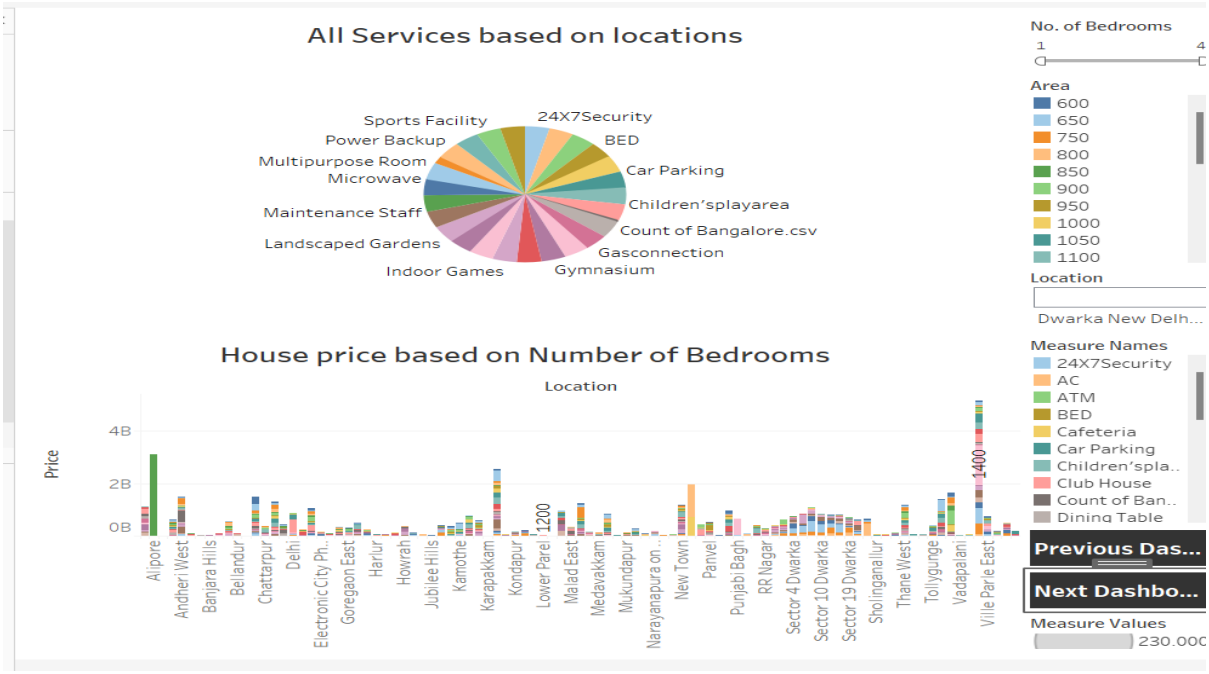
House Price and Intercom
Location
Alipore
Andheri West
Borivali West
Chembur
Dum Dum
Greater Kailash
Hebbal
Kandivali East
Kharghar
Malad West
Mira Road East
New Town
Powai
Rajarhat
Richmond Town
Tangra
Thane West
Ulwe
Uttam Nagar
Vasant Kunj
Price
zero
Intercom


All Services based on locations
24X7Security
ATM
BED
Cafeteria
Car Parking
Children'splayarea
Club House
Count of Bangalore.csv
Dining Table
Gasconnection
Gymnasium
Indoor Games
Jogging Track
Landscaped Gardens
Lift Available
Maintenance Staff
Microwave
Multipurpose Room
No. of Bedrooms
Power Backup
Sports Facility
Wifi

DASHBOARD:


Latitude and Longitude based on Location
Location
1 Lane Johri F..
3 Dwarka Sec..
4 Bunglows
5th Phase
5th Stage BE..
5th Stage Raj..
6th phase jp ..
7th Phase JP ..
8th Phase JP ..
10 Sector Dw..
15th Road
47 Sector 22 ..
48 Sector 22 ..
59 Sector 22 ..
72 Sector 23 ..
75 Noida Road
75 Sector 22 ..
77 Sector 6 R..
78 Sector 6 R..
79 Sector 23 ..
82 Sector 22 ..
85 Sector 22 ..
86 Sector 21 ..
92 Sector 22 ..
200 Feet Rad..
Abbigere
Abids
Abiramapura..
Abul Fazal En..
Acharya Jaga..
Action Area I
Action Area I ..
Action Area II..
Iran
Pakistan
China
Yemen
Pokhran 2
Khanpur
hyderabad
© 2023 Mapbox © OpenStreetMap
>2K unknown
Next Dashbo...


Number of houses based on area in sqf
Area
1800
1650
1600
1500
1450
1400
1350
1300
1250
1200
1150
0B 1B 2B 3B 4B 5B 6B 7B
Price
Vastu-complains based on location
Noida
Measure Names
Price
Rain Water Harv..
Vaastu Compliant
0
6,849
Previous Das...
Next Dashbo...
Houses price based on rainwater harvest pits
Location
Price
8B
6B
4B
2B
0B
Rain Water Harvesting
6K
4K
2K
0K
Uttam Nagar
Ulwe
Tollygunge
Thane West
Tangra
Rajarhat
Powai
Panvel
Noida
New Town
Narendrapur
Naia Sopara
Mira Road East
Madhyamgram
Kharghar
Keshtopur
Kalyan West
Howrah
Garia
Electronic City Ph..
Dum Dum
Borivali West
Behala
Andheri West
Alipore


All Services based on locations
Sports Facility
Power Backup
Multipurpose Room
Microwave
Maintenance Staff
Landscaped Gardens
Indoor Games
24X7Security
BED
Car Parking
Children'splayarea
Count of Bangalore.csv
Gasconnection
Gymnasium
No. of Bedrooms
1
4
Area
600
650
750
800
850
900
950
1000
1050
1100
Location
Dwarka New Delh...
Measure Names
24X7Security
AC
ATM
BED
Cafeteria
Car Parking
Children'spla..
Club House
Count of Ban..
Dining Table
House price based on Number of Bedrooms
Location
Price
4B
2B
0B
1200
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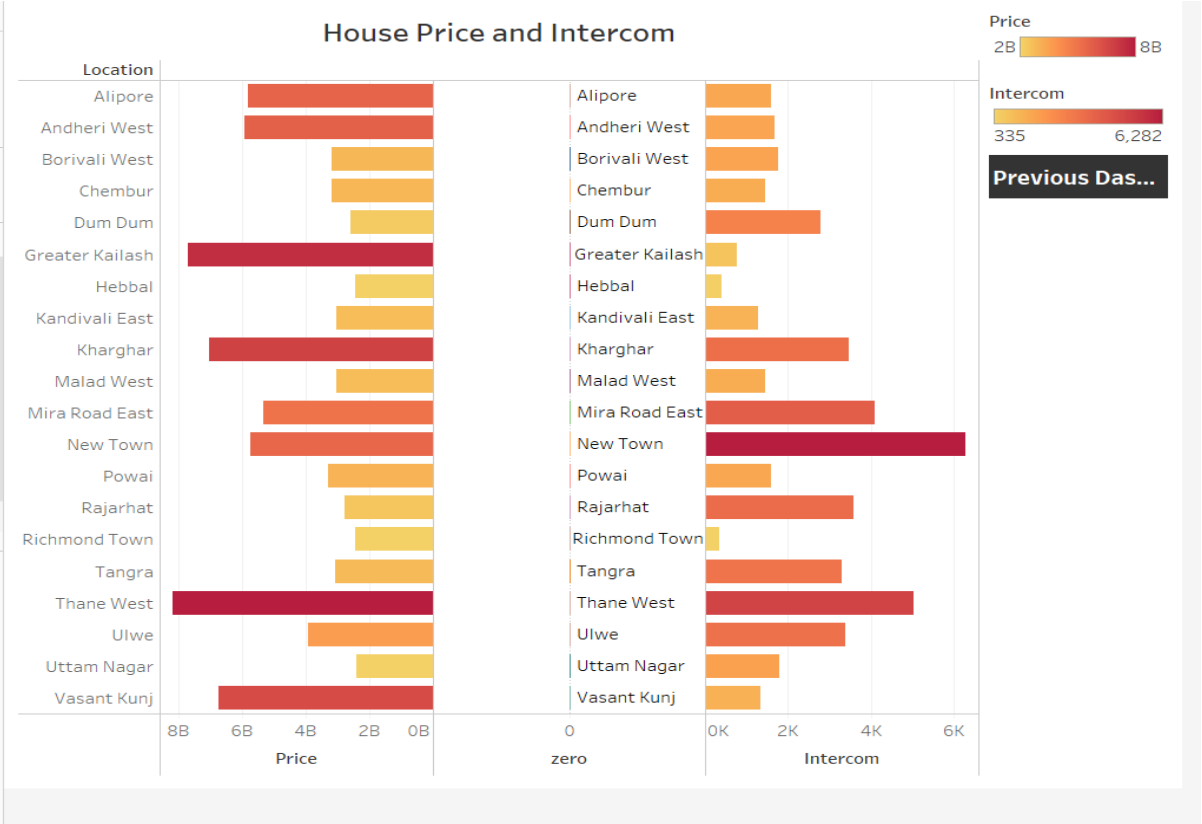
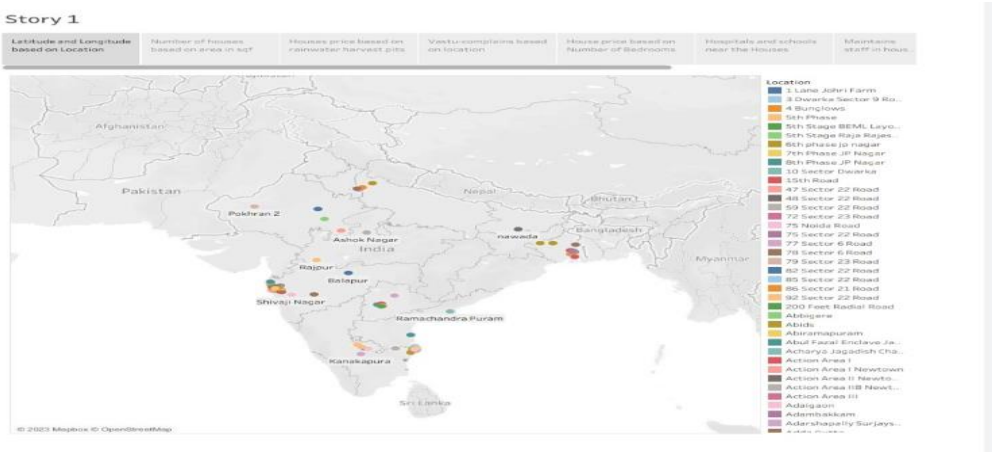
Alipore
Andheri West
Banjara Hills
Bellandur
Chattarpur
Delhi
Electronic City Ph..
Goregaon East
Harlur
Howrah
Jubilee Hills
Kamothe
Karapakkam
Kondapur
Lower Parel
Malad East
Medavakkam
Mukundapur
Narayanapura on..
New Town
Panvel
Punjabi Bagh
RR Nagar
Sector 4 Dwarka
Sector 10 Dwarka
Sector 19 Dwarka
Sholinganallur
Thane West
Tollygunge
Vadapalani
Ville Parle East
Previous Das...
Next Dashbo...
Measure Values
230.000


House Price and Intercom
Location
Alipore
Andheri West
Borivali West
Chembur
Dum Dum
Greater Kailash
Hebbal
Kandivali East
Kharghar
Malad West
Mira Road East
New Town
Powai
Rajarhat
Richmond Town
Tangra
Thane West
Ulwe
Uttam Nagar
Vasant Kunj
8B
6B
4B
2B
0B
Price
0
zero
0K
2K
4K
6K
Intercom
Price
2B
8B
Intercom
335
6,282
Previous Das...

STORY:


Story 1
Latitude and Longitude based on Location
Number of houses based on area in sqf
Houses price based on rainwater harvest pits
Vastu-complains based on location
House price based on Number of Bedrooms
Hospitals and schools near the Houses
Maintains staff in hous..
Location
Afghanistan
Pakistan
Nepal
Bhutan
Bangladesh
Myanmar
India
Pokhran 2
Ashok Nagar
nawada
Rajpur
Balagur
Shivaji Nagar
Ramachandra Puram
Kanakapura
Sri Lanka
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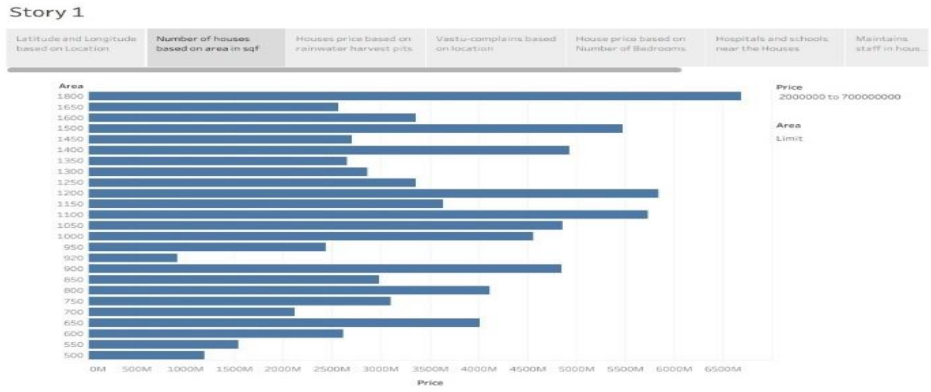
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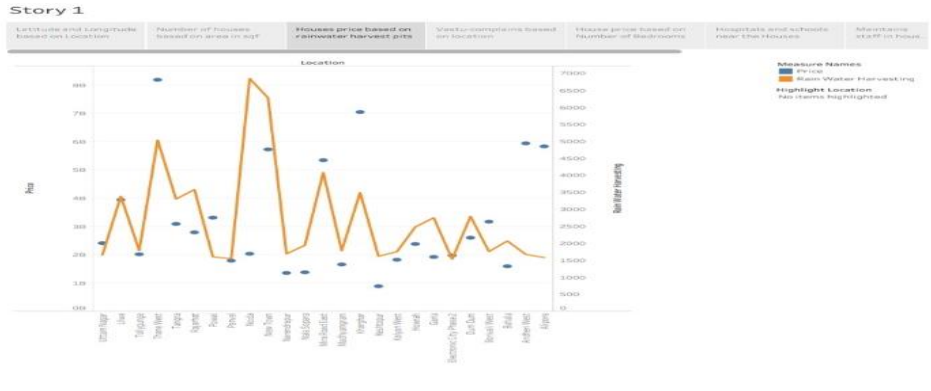
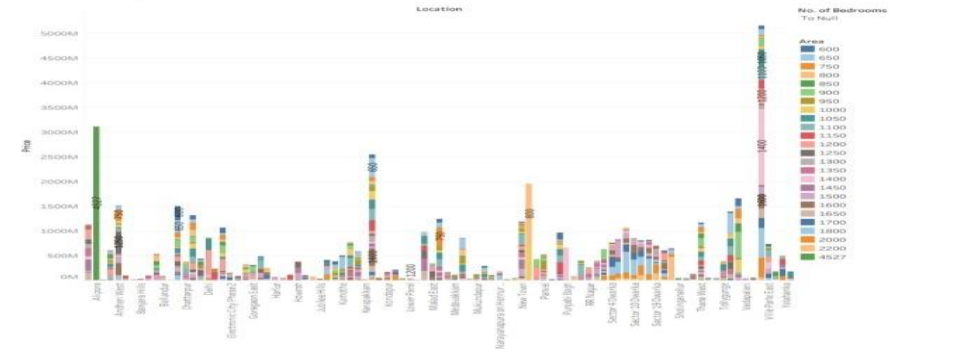
Latitude and Longitude based on Location
Number of houses based on area in sqf
Houses price based on rainwater harvest pits
Vastu-complains based on location
House price based on Number of Bedrooms
Hospitals and schools near the Houses
Maintains staff in hous..
Area
Price
Price
2000000 to 700000000
Area
Limit
0M 500M 1000M 1500M 2000M 2500M 3000M 3500M 4000M 4500M 5000M 5500M 6000M 6500M
Price


Story 1
Latitude and Longitude based on Location
Number of houses based on area in sqf
Houses price based on rainwater harvest pits
Vastu-complains based on location
House price based on Number of Bedrooms
Hospitals and schools near the Houses
Maintains staff in hous..
Location
Measure Names
Price
Rain Water Harvesting
Highlight Location
No items highlighted
Area
Rain Water Harvesting

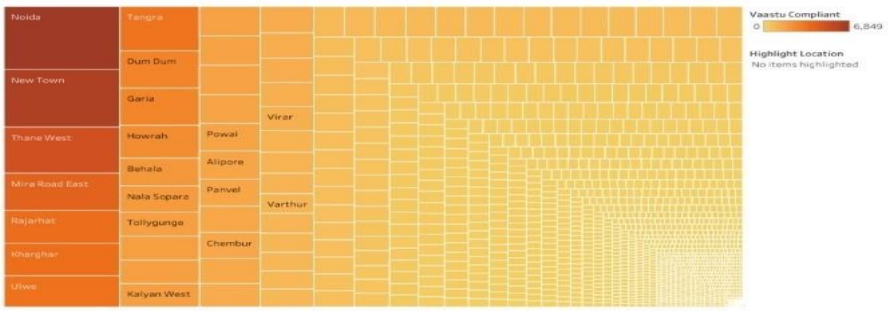
Story 1

Number of houses based on... | Houses price based on rainwater harvest pits | Vastu-complains based on location | **House price based on Number of Bedrooms** | Hospitals and schools near the Houses | Maintains staff in houses prices | House Price and Intercom



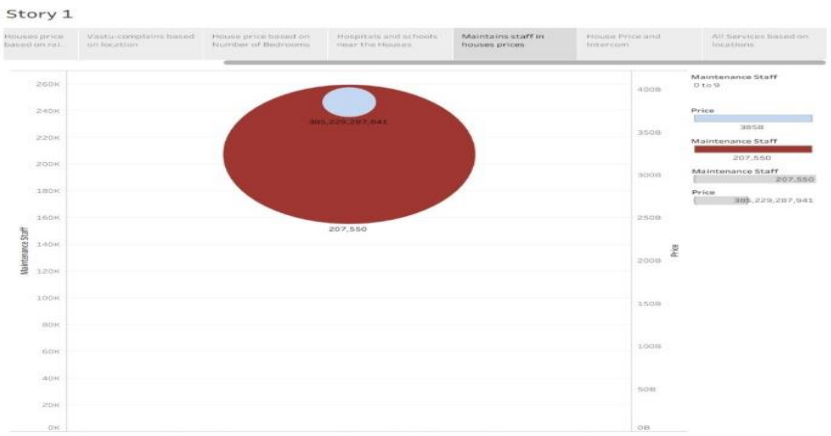
Story 1

Latitude and Longitude based... | Number of houses based on area in sqf | Houses price based on rainwater harvest pits | **Vastu-complains based on location** | House price based on Number of Bedrooms | Hospitals and schools near the Houses | Maintains staff in houses prices

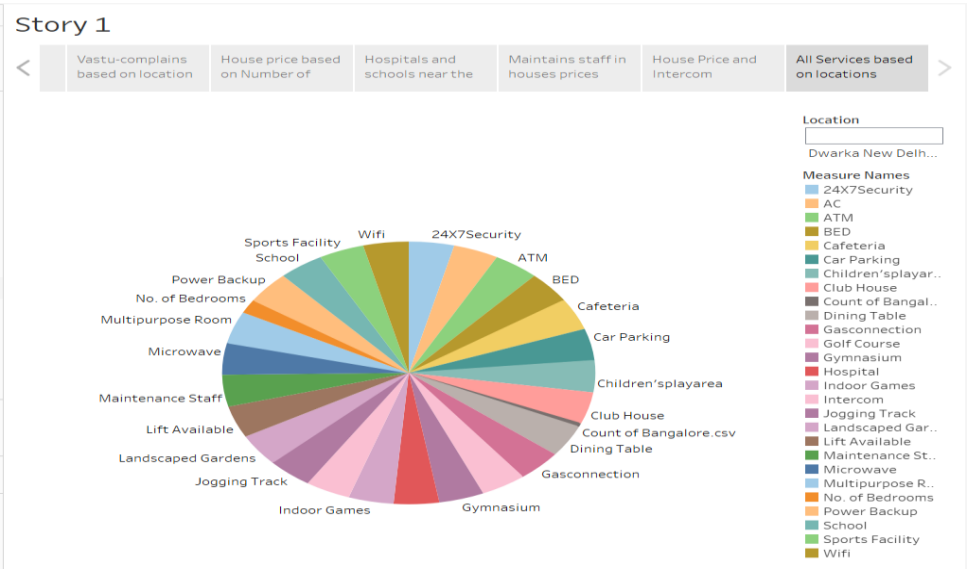


Story 1

Houses price based on rainwa... | Vastu-complains based on location | House price based on Number of Bedrooms | **Hospitals and schools near the Houses** | Maintains staff in houses prices | House Price and Intercom | All Services based on locations


Story 1
Maintains staff in houses prices
207,550
Maintenance Staff
Price

Story 1
House Price and Intercom
Location
Price
zero
Intercom


Story 1
Vastu-complains based on location
House price based on Number of
Hospitals and schools near the
Maintains staff in houses prices
House Price and Intercom
All Services based on locations
Location
Dwarka New Delh...
Measure Names
24X7Security
AC
ATM
BED
Cafeteria
Car Parking
Children'splayar..
Club House
Count of Bangal..
Dining Table
Gasconnection
Golf Course
Gymnasium
Hospital
Indoor Games
Intercom
Jogging Track
Landscaped Gar..
Lift Available
Maintenance St..
Microwave
Multipurpose R..
No. of Bedrooms
Power Backup
School
Sports Facility
Wifi
Sports Facility
School
Power Backup
No. of Bedrooms
Multipurpose Room
Microwave
Maintenance Staff
Lift Available
Landscaped Gardens
Jogging Track
Indoor Games
Gymnasium
Wifi
24X7Security
ATM
BED
Cafeteria
Car Parking
Children'splayarea
Club House
Count of Bangalore.csv
Dining Table
Gasconnection

House price prediction in a metropolitan city in India is a valuable solution for potential home buyers, real estate agents, and investors. By leveraging historical sales data, property details, and location-specific information, a predictive model can accurately estimate house prices. By addressing these requirements, the prediction model provides reliable insights, empowering stakeholders to make informed decisions in the fast-paced real estate market.

4. ADVANTAGE AND DISADVANTAGE

ADVANTAGE:

- As the safety and security of real estate investments are widely accepted, many investors consider property investment as a suitable hedge against inflation. Historically, property price appreciation and annual rental yield have consistently outperformed inflation.
- Before you invest in stocks or distribute your investments among several mutual funds, you conduct rigorous research on its historical returns, risks, expenses, etc. On the other hand, when you decide to buy a property, fewer hassles are involved.
- Local real estate markets have pronounced loopholes, and even investors can notice them. Property investment enthusiasts who follow local news and learn about the relative strengths of the neighbouring markets can pull off remarkable bargains.

DISADVANTAGE:

- Maintaining a property can be laborious and costly. The high capital requirement for supporting overhead costs and repaying a home loan is one of the major disadvantages of property investment. In addition, one may have to pay for unexpected maintenance issues like a leaky roof or broken pipes. Repair charges can be substantial.

- Property hunting demands sufficient time and experience. One needs to visit a location and check whether or not builders are providing all the promised amenities upon buying real estate. Before locking in deal, you must evaluate the reasonable price range and conduct background checks to ensure the value of your investment.

- High brokerage and legal charges are the foremost disadvantage of real estate investment.

5. APPLICATION:

- House price prediction can help the developer determine the selling price of a house and can help the customer to arrange the right time to purchase a house.
- Helps to analyse they real estate price to buy a house in low.
- To explore the nature of housing prices in different and increase the rate of interest to buy a house.
- Knowing the price range in the future and to predict the house prices in cities.
- Estimating a house price and the distribution of population associated with the house price are calculations.

6. CONCLUSION:

In conclusion, house price prediction in a metropolitan city in India is a valuable solution for potential home buyers, real estate agents, and investors.

By developing a predictive model using relevant datasets and features, stakeholders can gain insights into the factors influencing house prices and make informed decisions regarding property investments.

The solution should have a user-friendly interface, ensure transparency and explain the ability of predictions, prioritize data privacy and security, and define performance metrics for evaluation.

7. FUTURE SCOPE:

- Property prices in India are likely to increase over the coming years, mirroring the country's economic growth. However, increased cost of buying houses could hit the affordable segment.
- The goal is to provide a reliable and accurate prediction tool that assists users in navigating the competitive real estate market and maximizing their returns.
- To explore the nature of housing prices in different and increase the rate of interest to buy a house.
- To knowing the price range in the future and to predict the house prices in cities.