THANTHAI PERIYAR GOVERNMENT ARTS AND SCIENCE COLLEGE (AUTONOMOUS)

TRICHY 23.

DEPARTMENT OF MATHEMATICS

Team No: 11

NM ID: NM2023TMID02801

PROJECT TITLE: ANALYSING HOUSE PRICES OF METROPOLITAN AREAS IN INDIA

TEAM LEADER NAME: G. KARUPPAIYA

TEAM MEMBERS: S. SEHWAG

S. THIRUSELVAM

E. SUBASH

INTRODUCTION

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.

PURPOSE

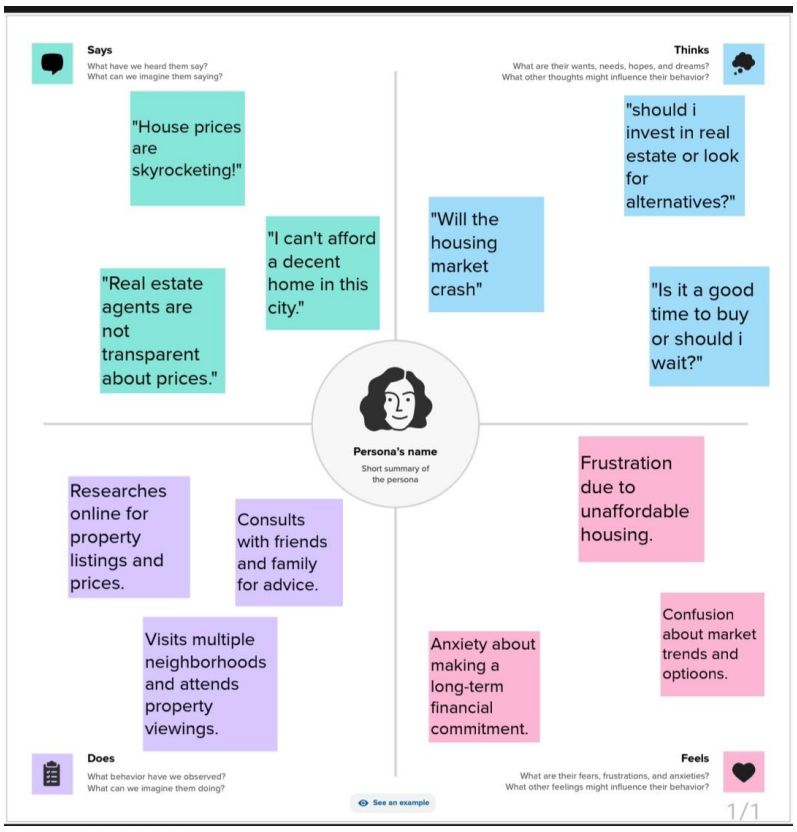
Integration capability, data privacy, and cost-effectiveness are also important considerations. By addressing these requirements, the prediction model provides reliable insights, empowering stakeholders to make informed decisions in the fast-paced real estate market.

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.

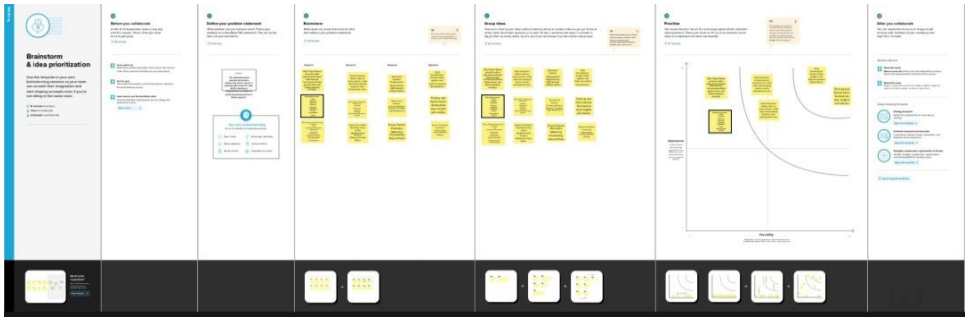
PROBLEM DEFINITION AND DESIGN THINKING

Problem Understanding, also known as Problem Definition or Problem Identification, is the initial and critical phase of any data analysis or problem-solving process. It involves gaining a clear and comprehensive understanding of the problem at hand, its context, scope, and objectives.

EMPATHY MAP



IDEATION AND BRAINSTORMING MAP



RESULT

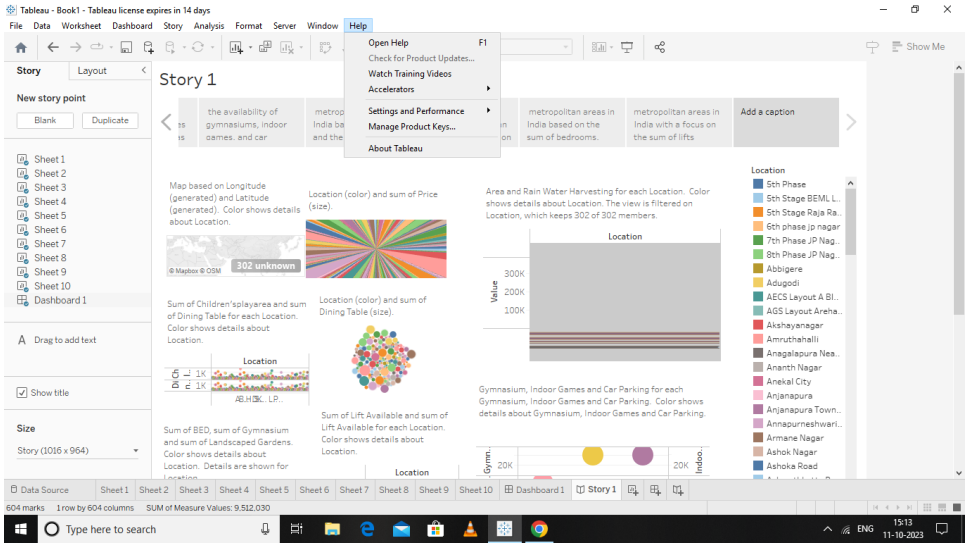


Tableau - Book1 - Tableau license expires in 14 days
File Data Worksheet Dashboard Story Analysis Format Server Window Help
Open Help F1
Check for Product Updates...
Watch Training Videos
Accelerators
Settings and Performance
Manage Product Keys...
About Tableau
Story 1
Add a caption
Map based on Longitude (generated) and Latitude (generated). Color shows details about Location.
Location (color) and sum of Price (size).
Area and Rain Water Harvesting for each Location. Color shows details about Location. The view is filtered on Location, which keeps 302 of 302 members.
Sum of Children'splayarea and sum of Dining Table for each Location. Color shows details about Location.
Location (color) and sum of Dining Table (size).
Gymnasium, Indoor Games and Car Parking for each Gymnasium, Indoor Games and Car Parking. Color shows details about Gymnasium, Indoor Games and Car Parking.
Sum of BED, sum of Gymnasium and sum of Landscaped Gardens. Color shows details about Location. Details are shown for Location.
Sum of Lift Available and sum of Lift Available for each Location. Color shows details about Location.
302 unknown
Location
5th Phase
5th Stage BEML L..
5th Stage Raja Ra..
6th phase jp nagar
7th Phase JP Nag..
8th Phase JP Nag..
Abbigere
Adugodi
AECS Layout A Bl..
AGS Layout Areha..
Akshayanagar
Amruthahalli
Anagalapura Nea..
Ananth Nagar
Anekal City
Anjanapura
Anjanapura Town..
Annapurneshwari..
Armane Nagar
Ashok Nagar
Ashoka Road
Type here to search
ENG 15:13 11-10-2023

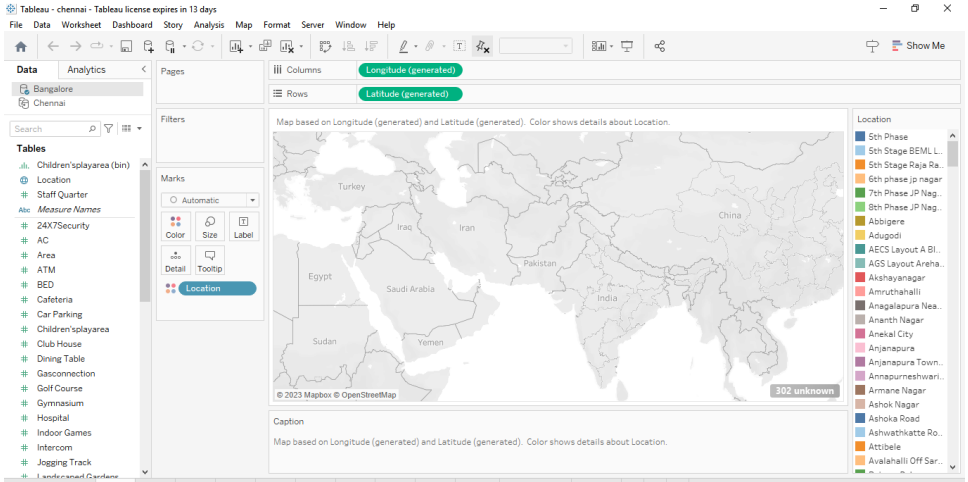


Tableau - chennai - Tableau license expires in 13 days
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Data Analytics
Bangalore
Chennai
Tables
Children'splayarea (bin)
Location
Staff Quarter
Measure Names
24X7Security
AC
Area
ATM
BED
Cafeteria
Car Parking
Children'splayarea
Club House
Dining Table
Gasconnection
Golf Course
Gymnasium
Hospital
Indoor Games
Intercom
Jogging Track
Pages
Columns
Longitude (generated)
Rows
Latitude (generated)
Filters
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Location
Map based on Longitude (generated) and Latitude (generated). Color shows details about Location.
Turkey
Iraq
Iran
China
Egypt
Saudi Arabia
Pakistan
India
Sudan
Yemen
© 2023 Mapbox © OpenStreetMap
302 unknown
Caption
Map based on Longitude (generated) and Latitude (generated). Color shows details about Location.
Location
5th Phase
5th Stage BEML L..
5th Stage Raja Ra..
6th phase jp nagar
7th Phase JP Nag..
8th Phase JP Nag..
Abbigere
Adugodi
AECS Layout A Bl..
AGS Layout Areha..
Akshayanagar
Amruthahalli
Anagalapura Nea..
Ananth Nagar
Anekal City
Anjanapura
Anjanapura Town..
Annapurneshwari..
Armane Nagar
Ashok Nagar
Ashoka Road
Ashwathkatte Ro..
Attibele
Avalahalli Off Sar..
Type here to search
ENG 15:46 12-10-2023

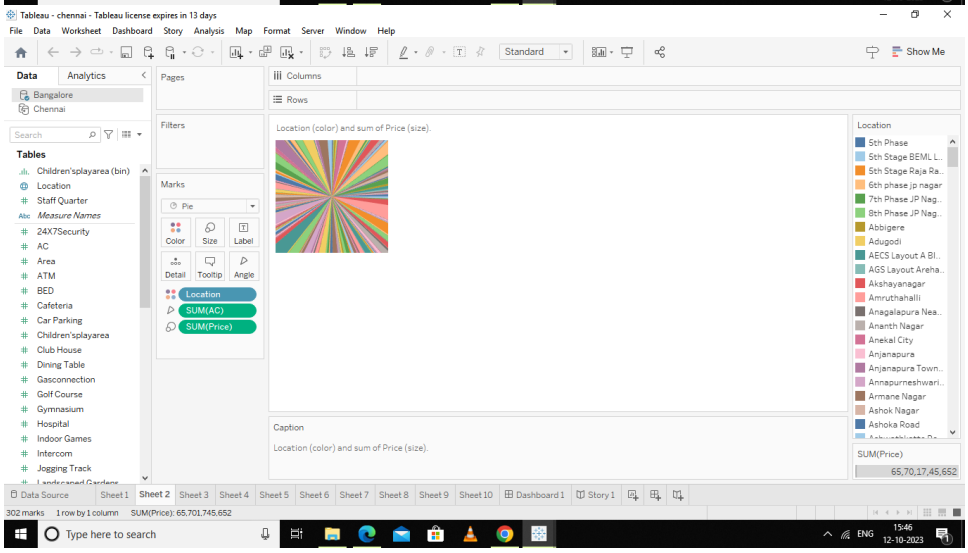


Tableau - chennai - Tableau license expires in 13 days
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Data Analytics
Bangalore
Chennai
Tables
Children'splayarea (bin)
Location
Staff Quarter
Measure Names
24X7Security
AC
Area
ATM
BED
Cafeteria
Car Parking
Children'splayarea
Club House
Dining Table
Gasconnection
Golf Course
Gymnasium
Hospital
Indoor Games
Intercom
Jogging Track
Pages
Columns
Rows
Filters
Marks
Pie
Color
Size
Label
Detail
Tooltip
Angle
Location
SUM(AC)
SUM(Price)
Location (color) and sum of Price (size).
Caption
Location (color) and sum of Price (size).
SUM(Price)
65,70,17,45,652
Location
5th Phase
5th Stage BEML L..
5th Stage Raja Ra..
6th phase jp nagar
7th Phase JP Nag..
8th Phase JP Nag..
Abbigere
Adugodi
AECS Layout A Bl..
AGS Layout Areha..
Akshayanagar
Amruthahalli
Anagalapura Nea..
Ananth Nagar
Anekal City
Anjanapura
Anjanapura Town..
Annapurneshwari..
Armane Nagar
Ashok Nagar
Ashoka Road
Type here to search
ENG 15:46 12-10-2023

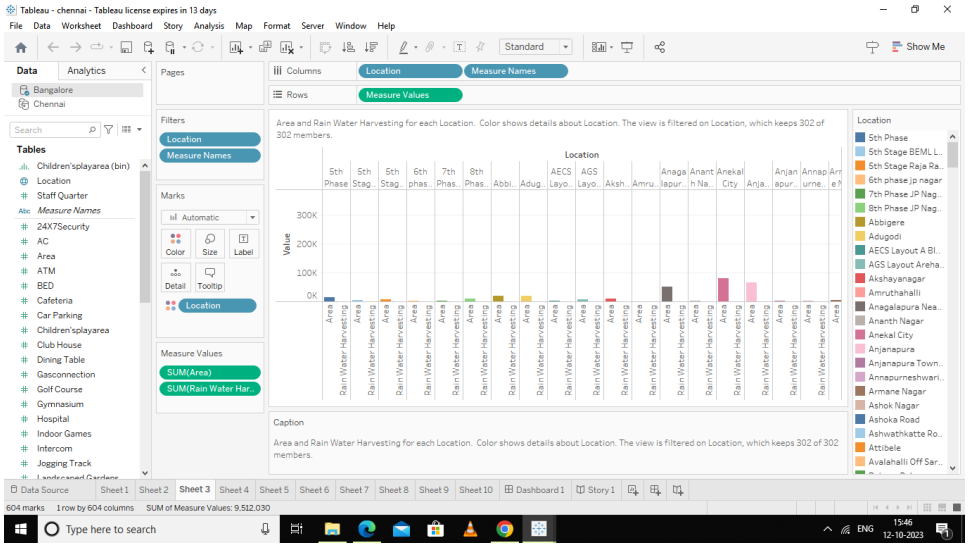


Tableau - chennai - Tableau license expires in 13 days
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Data Analytics
Bangalore
Chennai
Tables
Pages
Filters
Location
Measure Names
Marks
Automatic
Color Size Label
Detail Tooltip
Location
Measure Values
SUM(Area)
SUM(Rain Water Har..
Columns
Location
Measure Names
Rows
Measure Values
Area and Rain Water Harvesting for each Location. Color shows details about Location. The view is filtered on Location, which keeps 302 of 302 members.
Location
Value
300K
200K
100K
0K
Caption
Area and Rain Water Harvesting for each Location. Color shows details about Location. The view is filtered on Location, which keeps 302 of 302 members.
Sheet 3
604 marks 1 row by 604 columns SUM of Measure Values: 9,512,030
Type here to search
ENG
15:46
12-10-2023

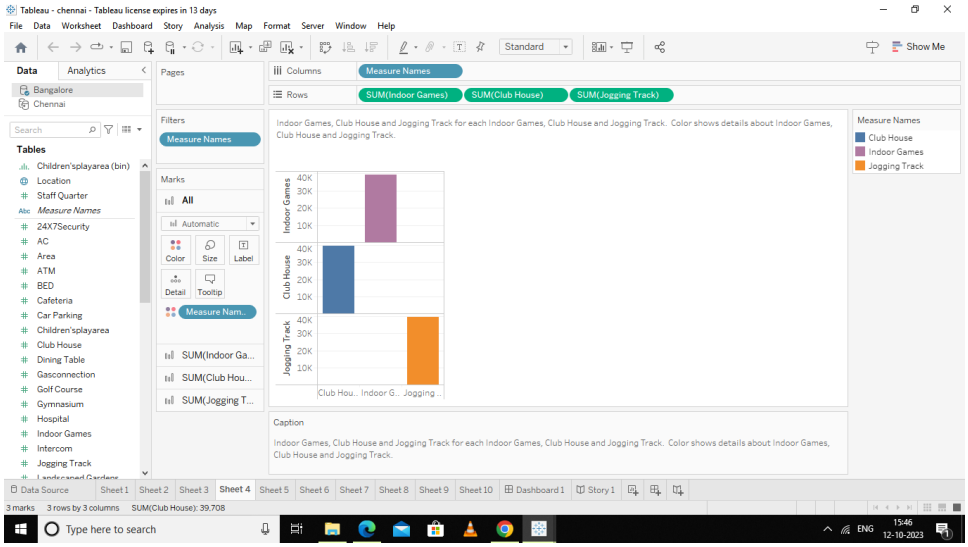


Tableau - chennai - Tableau license expires in 13 days
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Data Analytics
Bangalore
Chennai
Tables
Pages
Filters
Measure Names
Marks
All
Automatic
Color Size Label
Detail Tooltip
Measure Nam..
SUM(Indoor Ga..
SUM(Club Hou..
SUM(Jogging T..
Columns
Measure Names
Rows
SUM(Indoor Games)
SUM(Club House)
SUM(Jogging Track)
Indoor Games, Club House and Jogging Track for each Indoor Games, Club House and Jogging Track. Color shows details about Indoor Games, Club House and Jogging Track.
Measure Names
Club House
Indoor Games
Jogging Track
Indoor Games
Club House
Jogging Track
40K
30K
20K
10K
Club Hou..
Indoor G..
Jogging ..
Caption
Indoor Games, Club House and Jogging Track for each Indoor Games, Club House and Jogging Track. Color shows details about Indoor Games, Club House and Jogging Track.
Sheet 4
3 marks 3 rows by 3 columns SUM(Club House): 39,708
Type here to search
ENG
15:46
12-10-2023

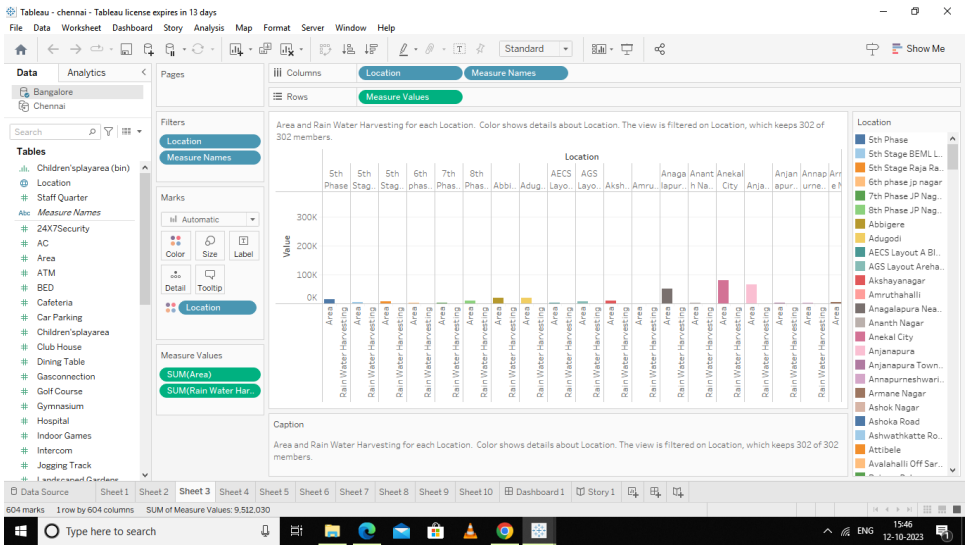


Tableau - chennai - Tableau license expires in 13 days
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Data Analytics
Bangalore
Chennai
Tables
Pages
Filters
Location
Measure Names
Marks
Automatic
Color Size Label
Detail Tooltip
Location
Measure Values
SUM(Area)
SUM(Rain Water Har..
Columns
Location
Measure Names
Rows
Measure Values
Area and Rain Water Harvesting for each Location. Color shows details about Location. The view is filtered on Location, which keeps 302 of 302 members.
Location
Value
300K
200K
100K
0K
Caption
Area and Rain Water Harvesting for each Location. Color shows details about Location. The view is filtered on Location, which keeps 302 of 302 members.
Sheet 3
604 marks 1 row by 604 columns SUM of Measure Values: 9,512,030
Type here to search
ENG
15:46
12-10-2023

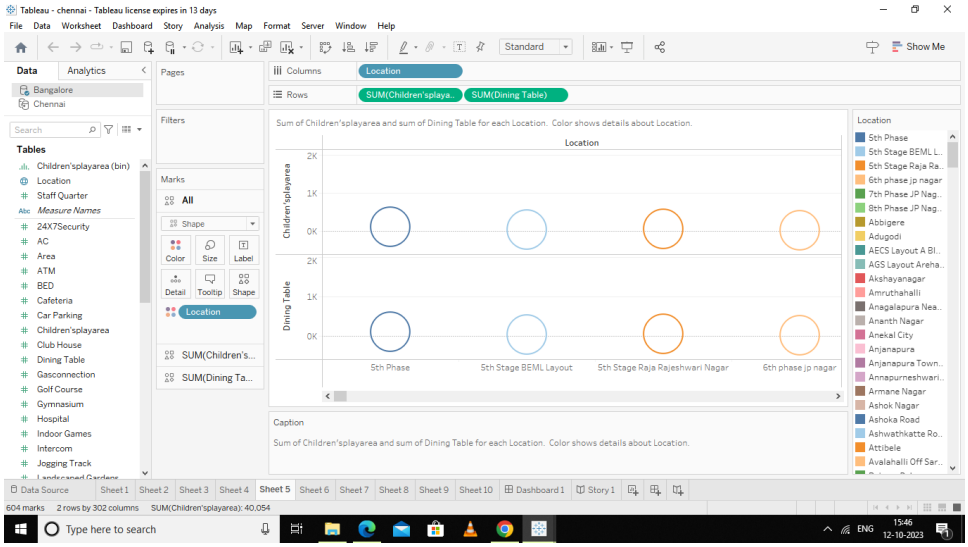


Tableau - chennai - Tableau license expires in 13 days
Location
SUM(Children'splaya..
SUM(Dining Table)
Sum of Children'splayarea and sum of Dining Table for each Location. Color shows details about Location.
Children'splayarea
Dining Table
5th Phase
5th Stage BEML Layout
5th Stage Raja Rajeshwari Nagar
6th phase jp nagar
Caption
Sum of Children'splayarea and sum of Dining Table for each Location. Color shows details about Location.

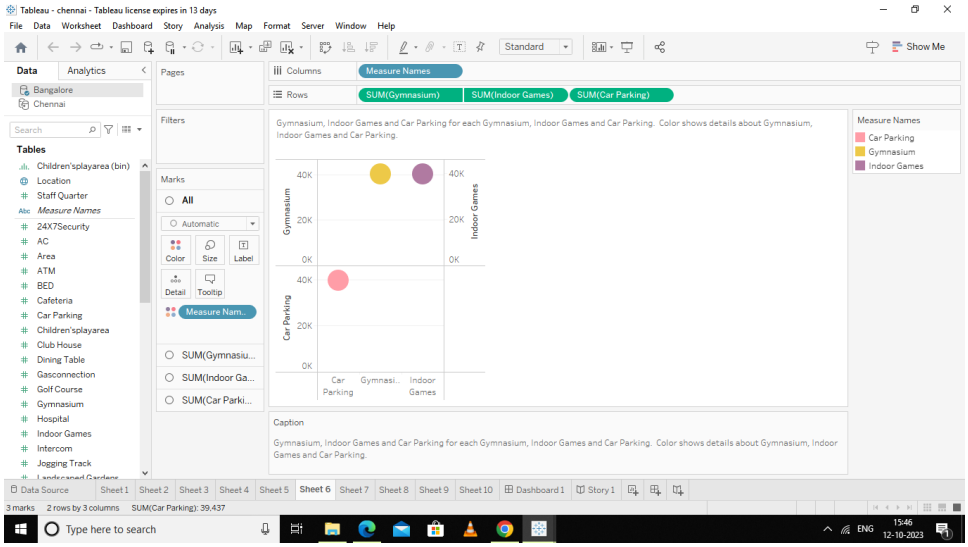


Tableau - chennai - Tableau license expires in 13 days
Measure Names
SUM(Gymnasium)
SUM(Indoor Games)
SUM(Car Parking)
Gymnasium, Indoor Games and Car Parking for each Gymnasium, Indoor Games and Car Parking. Color shows details about Gymnasium, Indoor Games and Car Parking.
Gymnasium
Indoor Games
Car Parking
Caption
Gymnasium, Indoor Games and Car Parking for each Gymnasium, Indoor Games and Car Parking. Color shows details about Gymnasium, Indoor Games and Car Parking.

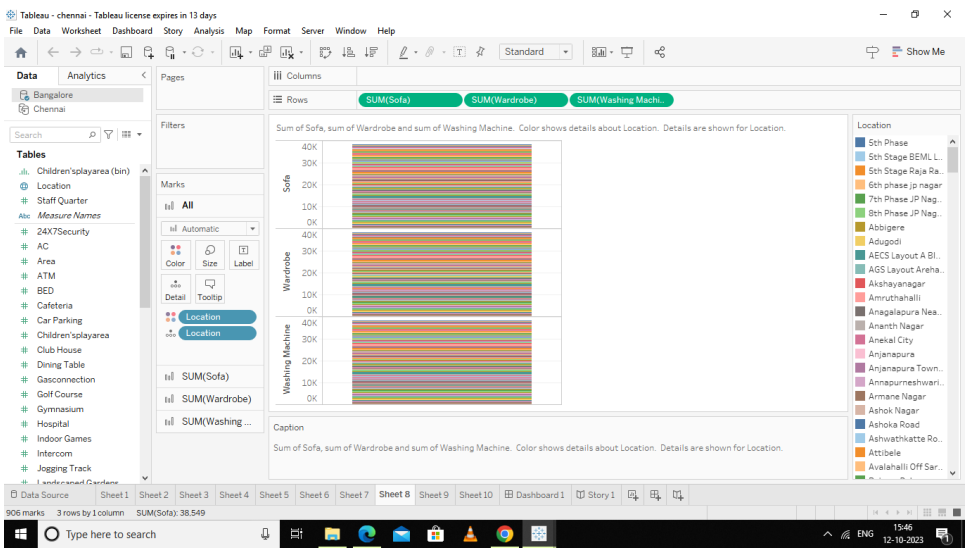


Tableau - chennai - Tableau license expires in 13 days
SUM(Sofa)
SUM(Wardrobe)
SUM(Washing Machi..
Sum of Sofa, sum of Wardrobe and sum of Washing Machine. Color shows details about Location. Details are shown for Location.
Sofa
Wardrobe
Washing Machine
Caption
Sum of Sofa, sum of Wardrobe and sum of Washing Machine. Color shows details about Location. Details are shown for Location.

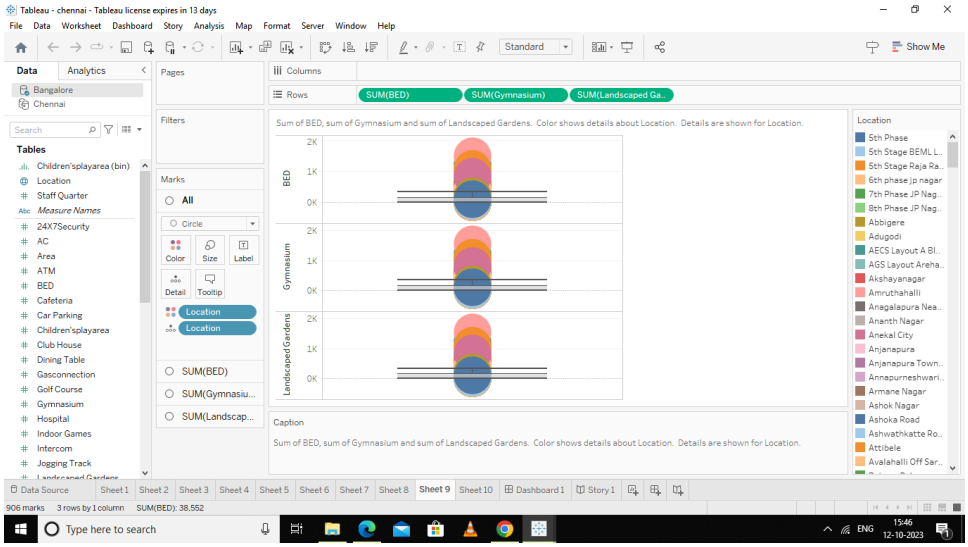


Tableau - chennai - Tableau license expires in 13 days
Sum of BED, sum of Gymnasium and sum of Landscaped Gardens. Color shows details about Location. Details are shown for Location.
Caption
Sum of BED, sum of Gymnasium and sum of Landscaped Gardens. Color shows details about Location. Details are shown for Location.

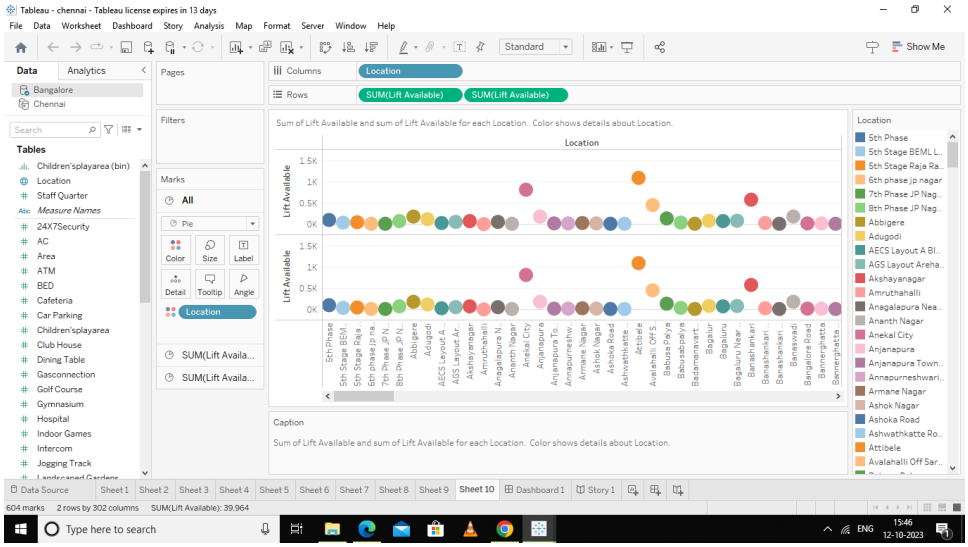


Tableau - chennai - Tableau license expires in 13 days
Sum of Lift Available and sum of Lift Available for each Location. Color shows details about Location.
Caption
Sum of Lift Available and sum of Lift Available for each Location. Color shows details about Location.

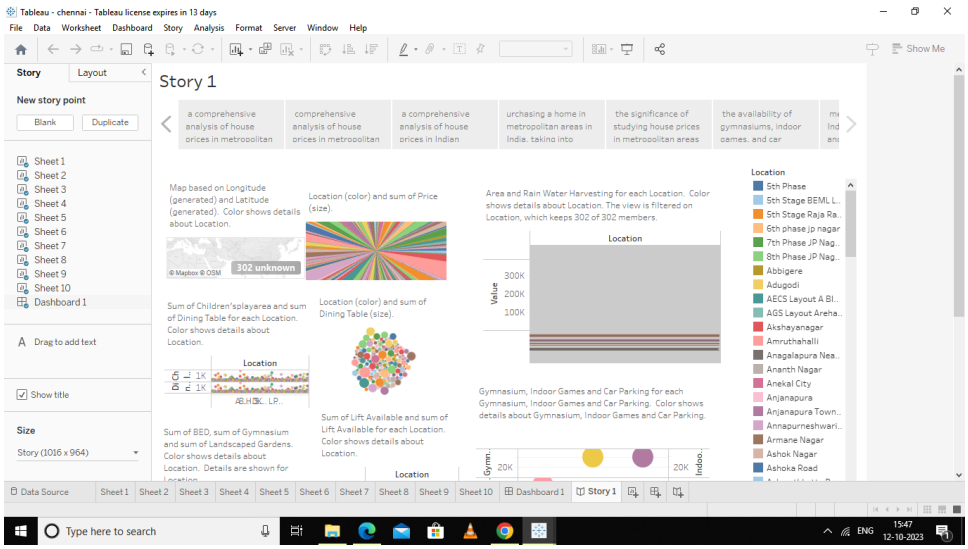


Tableau - chennai - Tableau license expires in 13 days
Story 1
302 unknown

ADVANTAGES AND DISADVANTAGES

Keeping in view the rapid urbanisation and regional disparities, it is not unexpected that it may lead to some sort of differences in regional houses prices, where housing and real estate are considered as major sources of physical and financial asset. This also leads to the differences in the dynamics of house prices determination. It simply means that there might be shift of house prices in cities from average , in the country, depending upon its economic status. For instance, average house prices in the poorer provinces might be lower than the national average. Similarly, for richer states, the urban house prices, on average might be higher than the national average.

APPLICATIONS

Monday seems to have slightly better flow than the other weekdays, and particularly better than Saturday. As expected, Sunday has the lightest traffic. More drivers can be used on Monday than on any other days.

CONCLUSION

In this report, all the interesting insights that can be derived from a detailed analysis of the dataset are discussed.

FUTURE SCOPE

Urban Planning: With rapid urbanization there is a growing need for effective city planning.

Data-Driven Governance: Governments can be utilize data analysis to make informed decisions, allocate resources efficiently, and address urban challenges like pollution, waste management, and housing.