# PROJECT REPORT

# ON

# ANALYSING HOUSING PRICES IN METROPOLITAN AREAS OF INDIA

**BATCH: 2021-2024** 

MMES Women's Arts and Science College Hakeem Nagar, Melvisharam.

**Department of B.sc Mathematics** 

# **Submitted by:**

#### **TEAM MEMBERS**

- 1. B. Yazhini
- 2. B. Sasikala
- 3. S. Roja
- 4. R. Deepa

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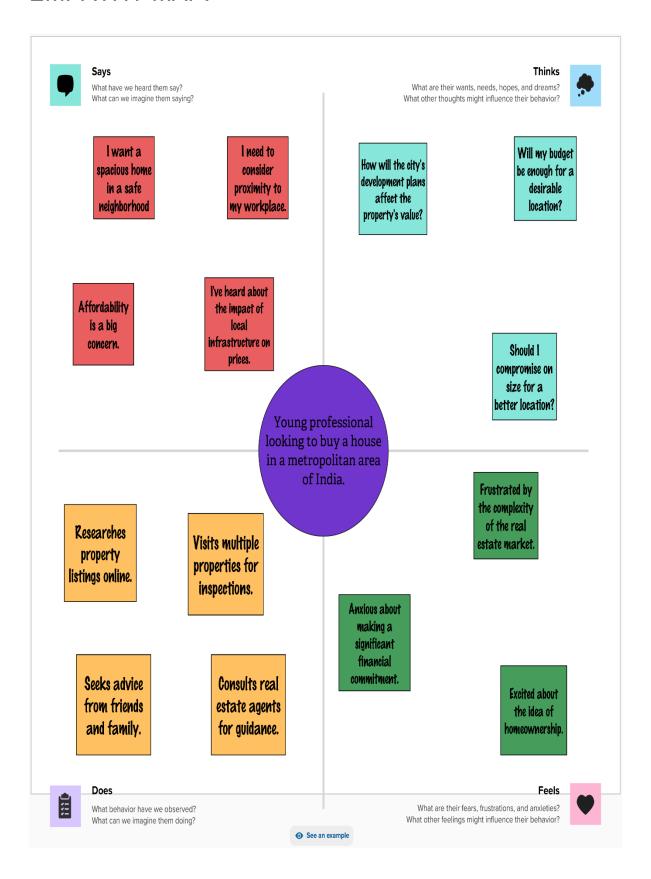
# INTRODUCTION

OVERVIEW: Analysing housing prices in metropolitan areas of India is a complex and multifaceted task that requires a comprehensive understanding of various factors influencing the real estate market. From economic conditions and population growth to infrastructure development and government policies, numerous variables play a crucial role in determining the fluctuating real estate values in these densely populated urban centres. In this analysis, we will delve into the key drivers of housing prices, examine regional variations, and explore the broader implications for both buyers and investors in the dynamic Indian metropolitan housing market.

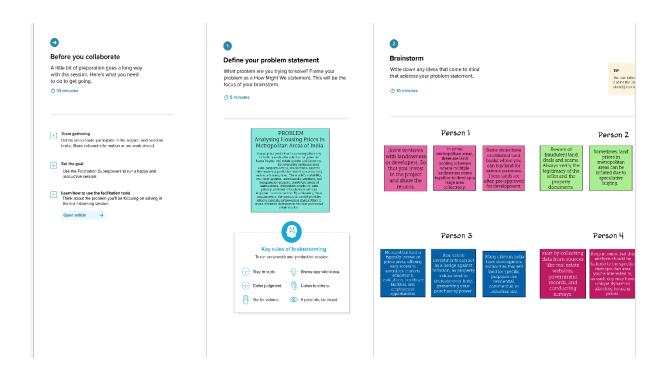
PURPOSE: House price prediction in a metropolitan city in India is a valuable solution for potential home buyers, real estate agents, and investors. By leveraging historical sales data, property details, and location-specific information, a predictive model can accurately estimate house prices. The model's 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.

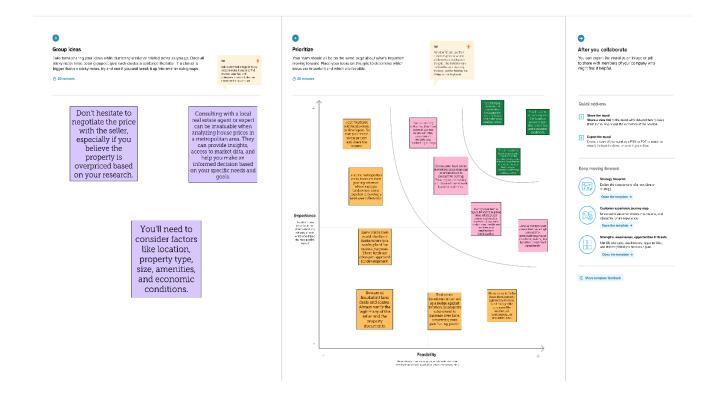
# PROBLEM DEFINITION & DESIGN THINKING

#### **EMPATHY MAP:**



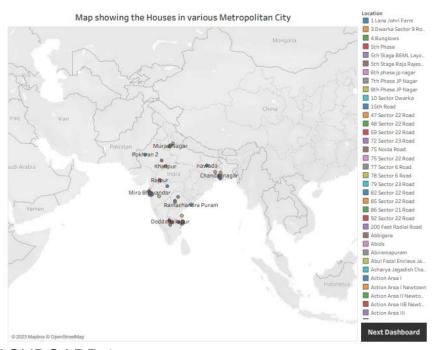
### **IDEATION & BRAINSTROMING MAP:**





#### **RESULT:**

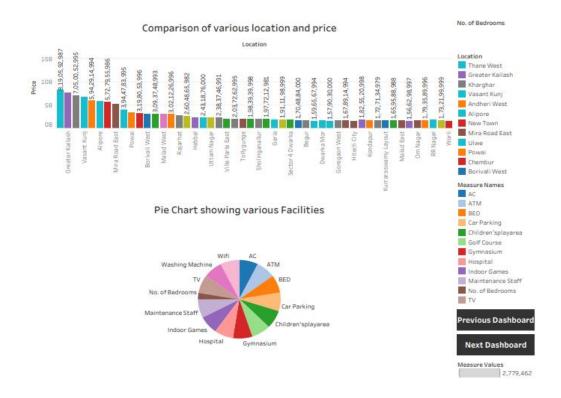
This is our dash board we designed our dash board by various sheets. We analysis various problems from given dataset. DASHBOARD 1:



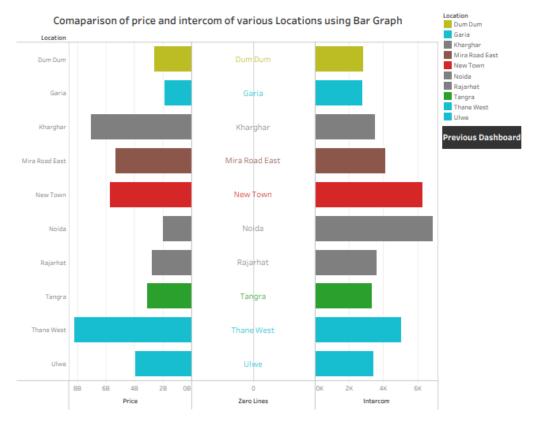
#### **DASHBOARD 2:**



#### **DASHBOARD 3:**



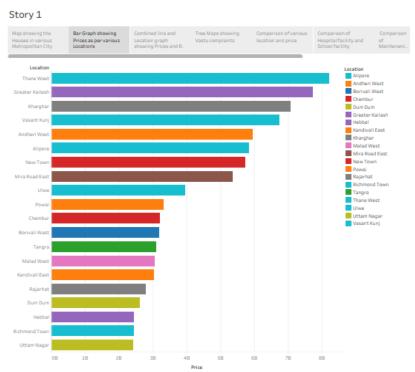
#### **DASHBOARD 4:**



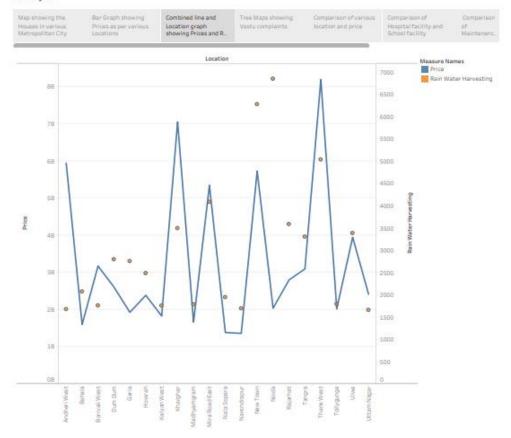
This is our story joining our various sheets, we made from the

# data set given. This story tells about various analysis of metropolitan city in India. STORY:

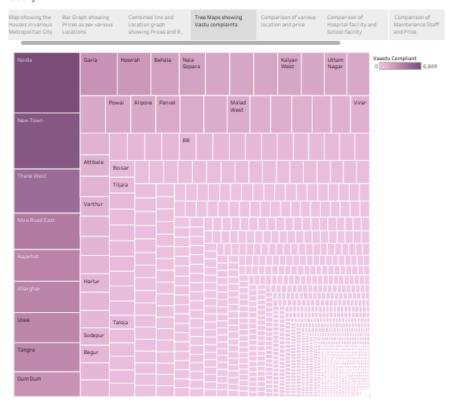




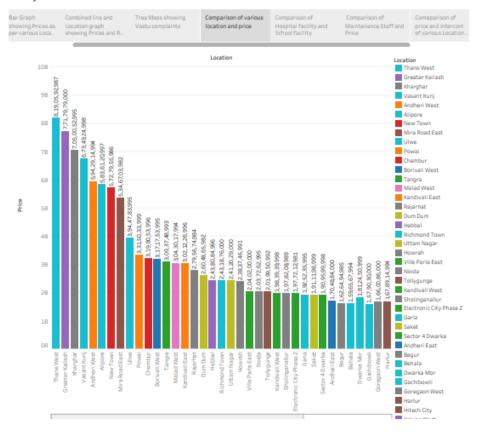
Story 1



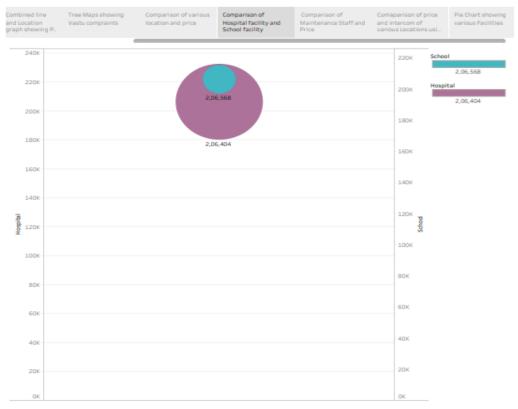
#### Story 1



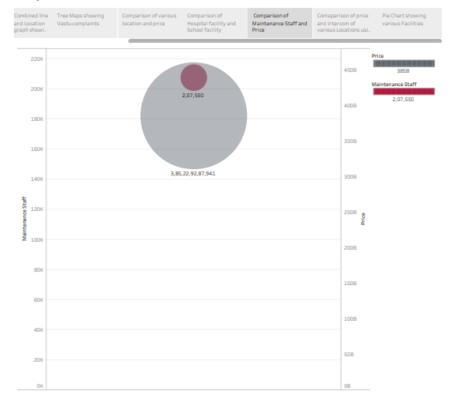
Story 1



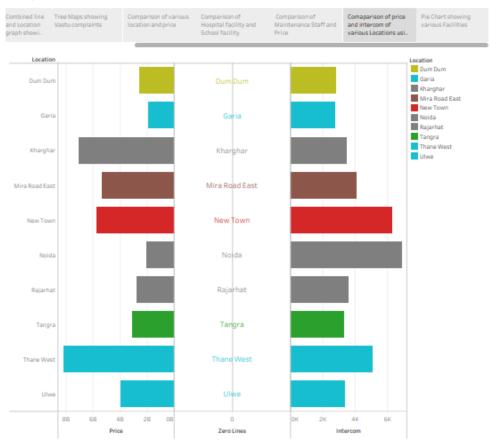
#### Story 1



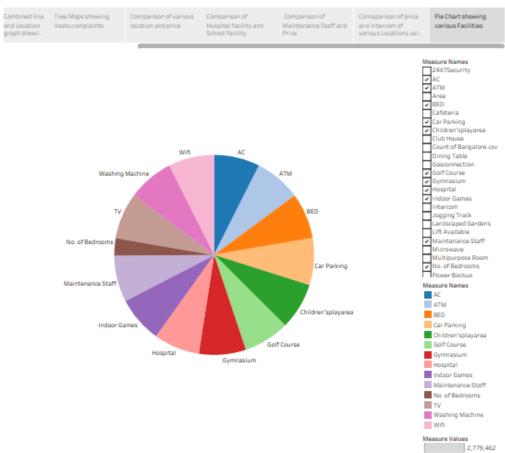
Story 1



#### Story 1







The story tells about the various analyses to that location, prices and other necessary facilities. Accordingly, one can analyse the story and get a clear cut idea about buying a house in metropolitan city of India.

## **ADVANTAGES & DISADVANTAGES**

# **ADVANTAGES**

1. **Market Insights**: It provides valuable insights into the economic activity and consumer behaviour in different regions, helping businesses make informed decisions.

- 2. **Regional Comparisons**: Enables businesses and policymakers to compare prices and cost of living across cities, aiding in resource allocation and policy formulation.
- 3. **Investment Opportunities**: Investors can identify areas with growth potential and make informed investment choices.
- 4. **Salary Benchmarking**: Helps in setting competitive salaries for employees in different cities, considering the cost of living.
- 5. **Urban Planning**: Helps urban planners understand the affordability of housing and basic amenities, leading to more effective city planning.

#### **DISADVANTAGES:**

- 1. **Data Variability**: Prices can fluctuate rapidly, making it challenging to maintain accurate and up-to-date information.
- 2. **Complexity**: Analysing prices in diverse metropolitan areas can be complex due to differences in local economies, cultures, and market dynamics.
- 3. **Sampling Bias**: Depending on the data sources, there might be biases in the sample, leading to inaccurate conclusions.
- 4. **Privacy Concerns**: Collecting and analysing price data could raise privacy issues, especially if it involves individual spending patterns.
- 5. **Overgeneralization**: Extrapolating from metropolitan areas to smaller cities or rural areas may not be accurate, leading to flawed policies or business strategies.

**In conclusion**, while analysing prices in metropolitan areas of India can yield valuable insights, it's essential to consider the limitations and potential biases in the data and avoid overgeneralization when applying the findings to different regions.

# **APPLICATIONS**

Analysing various prices in metropolitan areas of India has several practical applications:

- 1. **Cost of Living Assessment**: Businesses and individuals can use this analysis to understand the cost of living in different cities, helping them make informed decisions about where to live or set up operations.
- 2. **Business Expansion**: Companies can identify cities where their products or services might be more competitively priced or in higher demand, aiding in strategic expansion plans.
- 3. **Real Estate Investment**: Real estate developers and investors can use price data to identify areas with potential for growth or assess property investment opportunities.
- 4. **Retail Strategy**: Retailers can adjust pricing and product offerings based on local market conditions to maximize sales and profitability.
- 5. **Salary Structure**: Employers can set competitive salary structures and benefits packages for employees in different cities, considering the local cost of living.

- 6. **Urban Planning**: Government agencies and urban planners can use price data to inform infrastructure development, affordable housing initiatives, and urban policies.
- 7. **Tourism and Hospitality**: The tourism industry can set pricing strategies and identify popular destinations based on consumer spending patterns in metropolitan areas.
- 8. **Consumer Behaviour Studies**: Market researchers can analyse price data to gain insights into consumer behaviour, preferences, and purchasing power.
- 9. **Policy Formulation**: Policymakers can use price data to design policies that address income inequality, housing affordability, and regional economic disparities.
- 10. **Investment Decisions**: Investors can make informed decisions about stocks, mutual funds, or bonds by considering the economic health of different metropolitan areas.

Analysing prices in metropolitan areas provides a valuable tool for various stakeholders to adapt their strategies and policies to the local economic conditions and consumer behaviours, ultimately leading to more effective decision-making and resource allocation.

# CONCLUSION

Analysing various prices in metropolitan areas of India reveals significant disparities in cost of living. Cities like Mumbai and Delhi tend to have higher prices for housing, transportation, and basic amenities, making them more expensive to live in. In contrast, cities like Hyderabad and Pune may offer a relatively

lower cost of living. Factors such as real estate demand, income levels, and local economies play a crucial role in these differences. It's essential for individuals to consider these variations when making decisions about where to live or invest.

# **FUTURE SCOPE**

The future scope of analysing prices in metropolitan areas of India is promising and can serve various purposes:

- 1. **Urban Planning**: Price analysis can inform urban planning and development, helping authorities understand where infrastructure investments are needed most.
- 2. **Real Estate Investment**: Investors can use such data to make informed decisions about where to invest in properties and anticipate potential returns.
- 3. **Policy Formulation**: Governments can develop policies to address disparities and improve affordability in expensive cities.
- 4. **Consumer Behaviour**: Understanding price differences can help consumers make informed choices about where to live and how to budget.
- 5. **Economic Research**: Economists can use this data to study economic trends, income disparities, and their impact on metropolitan areas.
- 6. **Start-ups and Businesses**: Start-ups and businesses can identify cost-effective locations for operations or expansions.

- 7. **Quality of Life**: Assessing prices can help people determine the overall quality of life in a city.
- 8. **Sustainability**: Analysing prices can highlight the environmental and social sustainability of a metropolitan area.

With the growing importance of urbanization in India, ongoing price analysis will be invaluable for individuals, businesses, and policymakers to make informed decisions and foster balanced growth.

# THANK YOU.