

ANALYSING HOUSING PRICES IN METROPOLITAN AREAS OF INDIA WITH TABLEAU

1.INTRODUCTION:

1.1 Overview:

The "Analyzing Housing Prices in Metropolitan Areas of India" project aims to investigate and understand the factors influencing real estate pricing trends in major Indian cities. Through data analysis and statistical modeling, this project seeks to provide valuable insights into the dynamics of housing markets, helping stakeholders make informed decisions regarding property investments, development strategies, and urban planning.

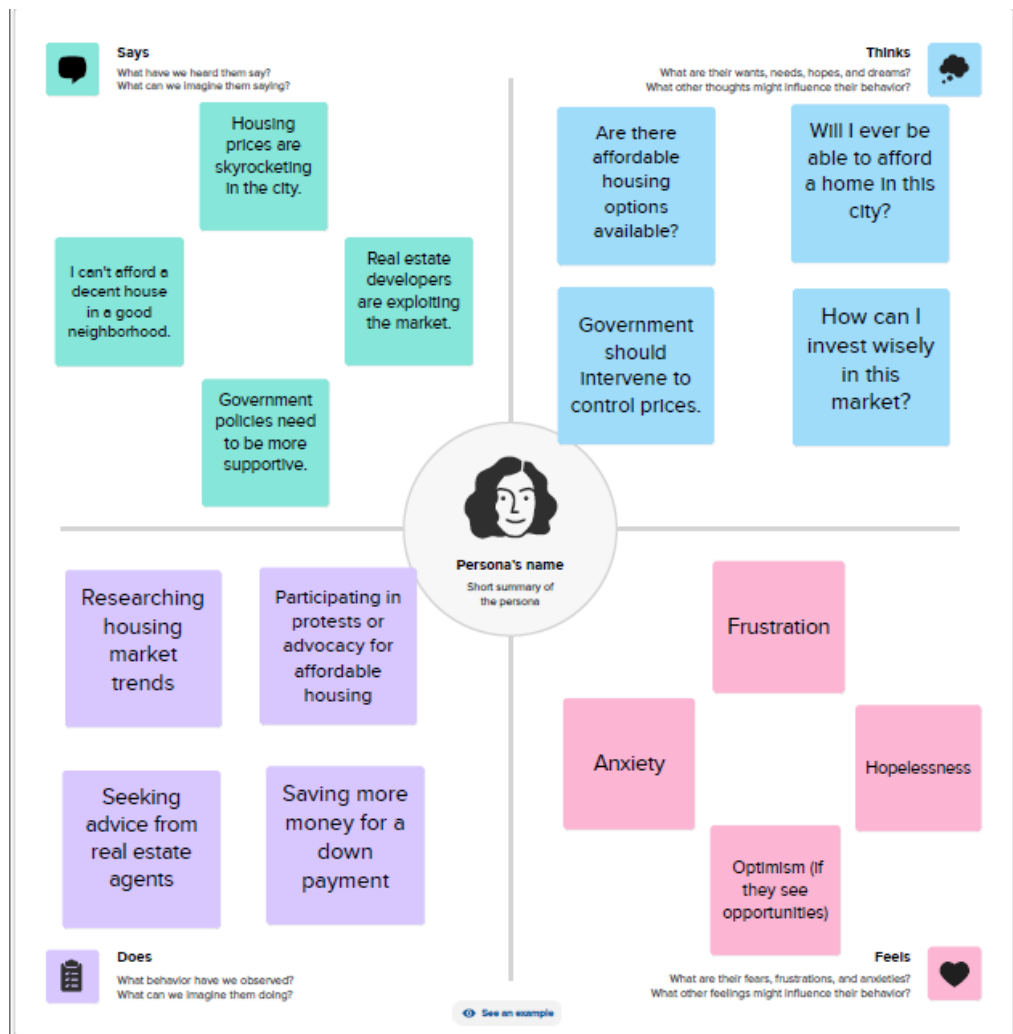
1.2 Purpose:

The project on "Analyzing Housing Prices in Metropolitan Areas of India" can serve several important purposes:

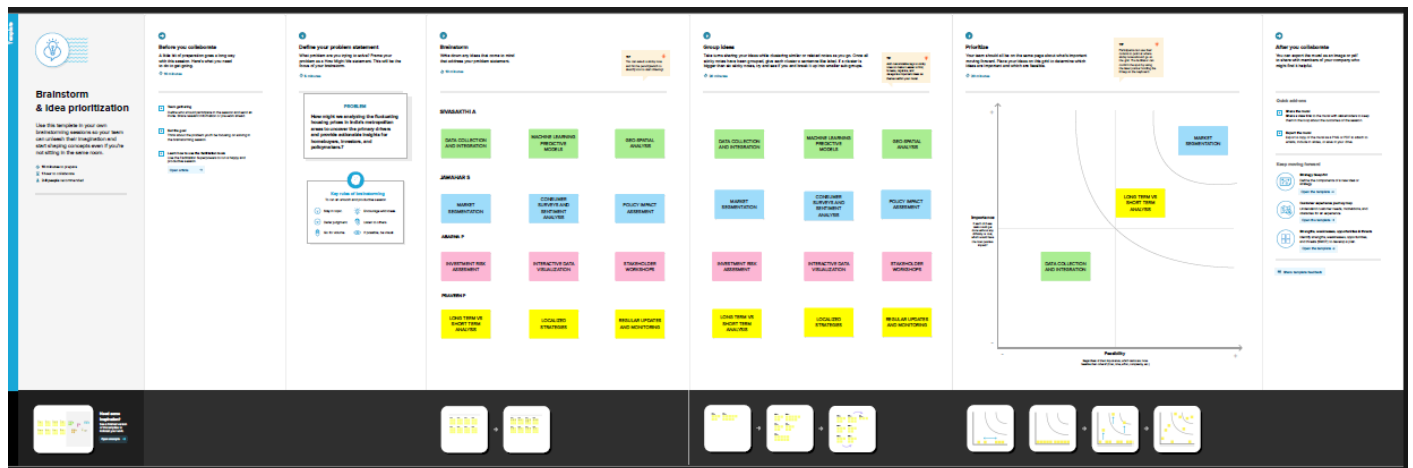
- I. **Investment Decision-Making:** It can help property investors, both individuals and institutions, identify areas with potential for growth in property values, enabling them to make informed investment decisions
- II. **Urban Planning:** Local governments and city planners can utilize the findings to understand housing demand patterns, allowing for better urban development and infrastructure planning.
- III. **Affordable Housing Initiatives:** The project can highlight areas with affordability challenges, aiding policymakers in crafting targeted initiatives to address housing affordability issues.
- IV. **Market Forecasting:** Real estate developers and agents can use the analysis to anticipate market trends and tailor their strategies for pricing and marketing properties.
- V. **Risk Mitigation:** Banks and financial institutions can assess the risks associated with mortgage lending by understanding the factors impacting housing prices.
- VI. **Data-Driven Decision-Making:** It encourages evidence-based decision-making in the real estate sector, reducing speculation and promoting stability in housing.

2.PROBLEM DEFINITION AND DESIGN THINKING:

2.1 Empathy map:



2.2 Ideation and brainstorming map:

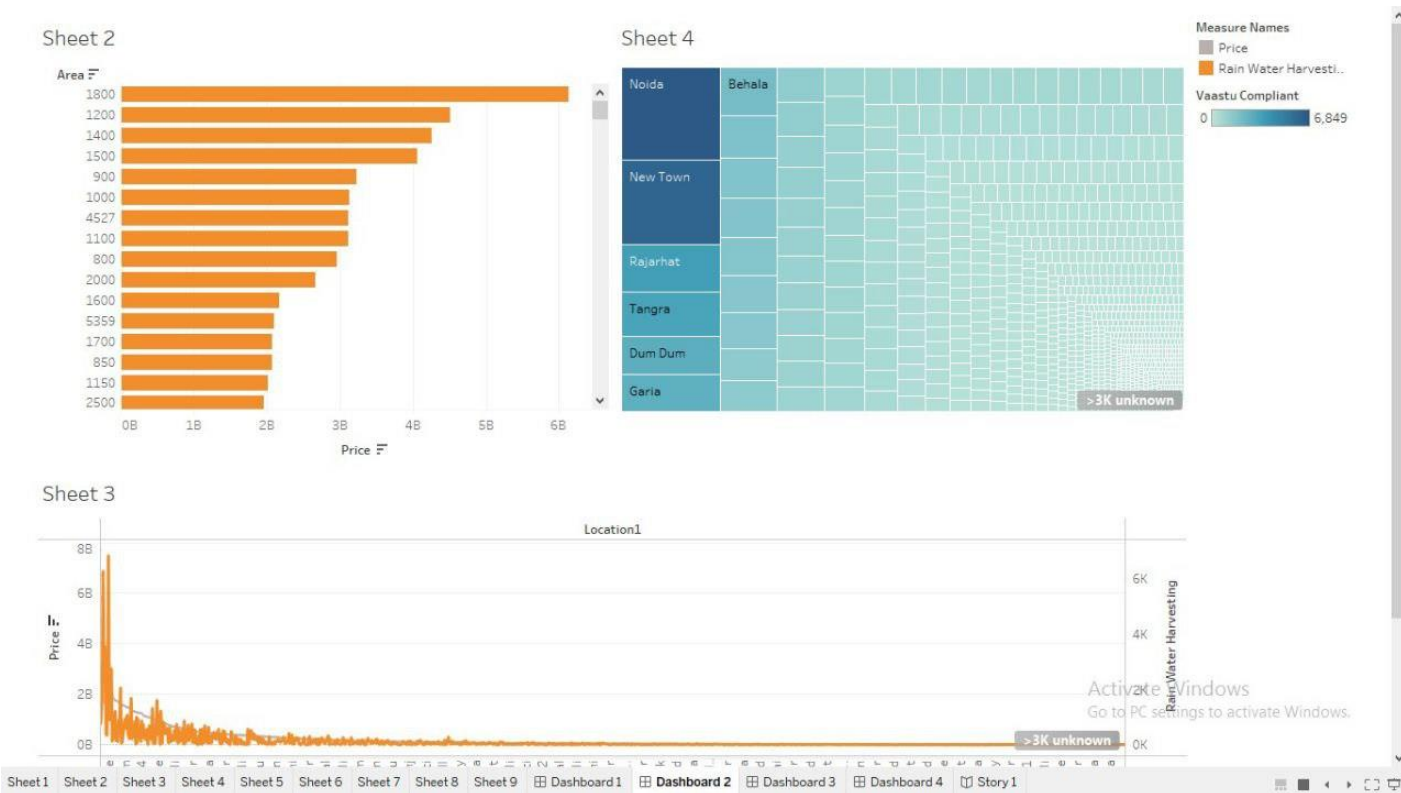


3.RESULT:

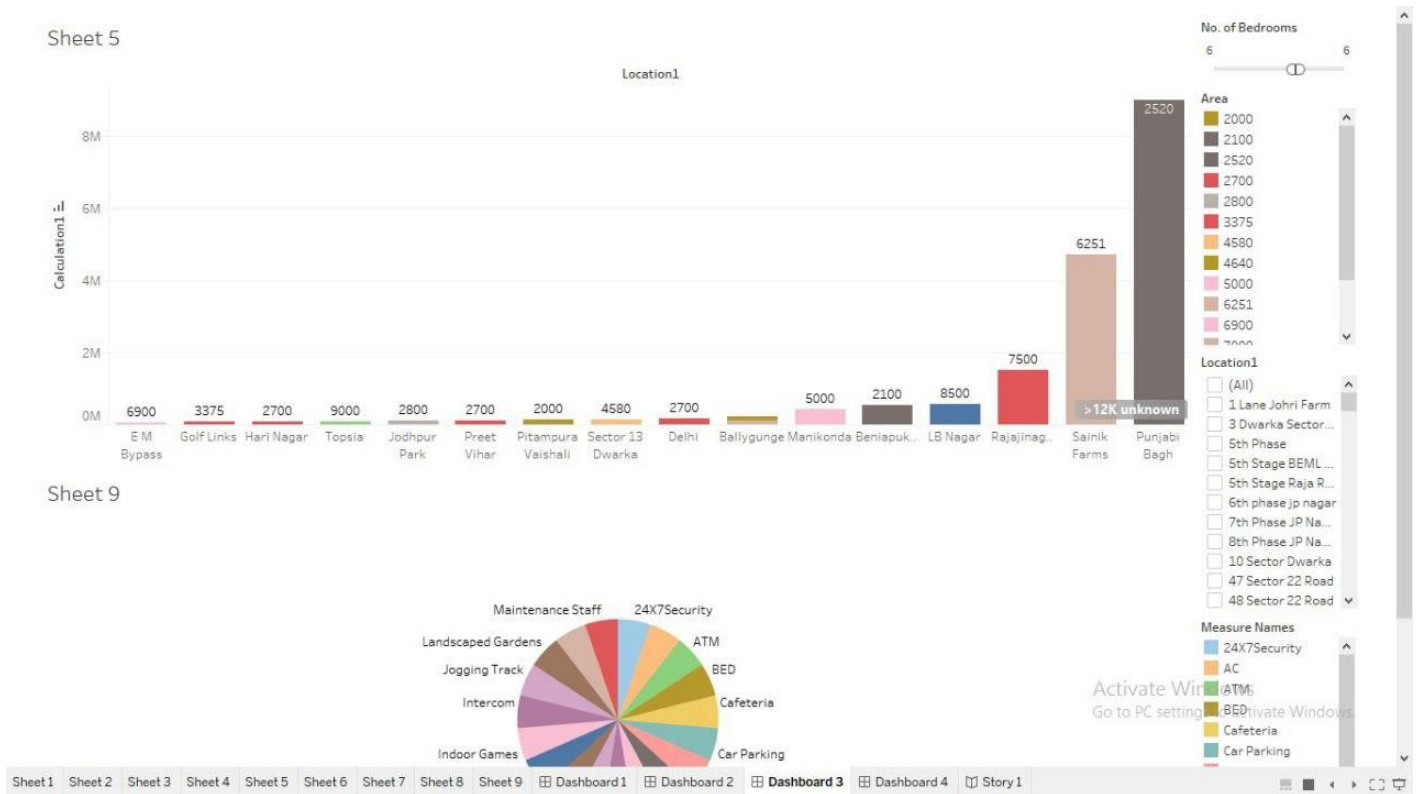
Dashboard 1:



Dashboard 2:



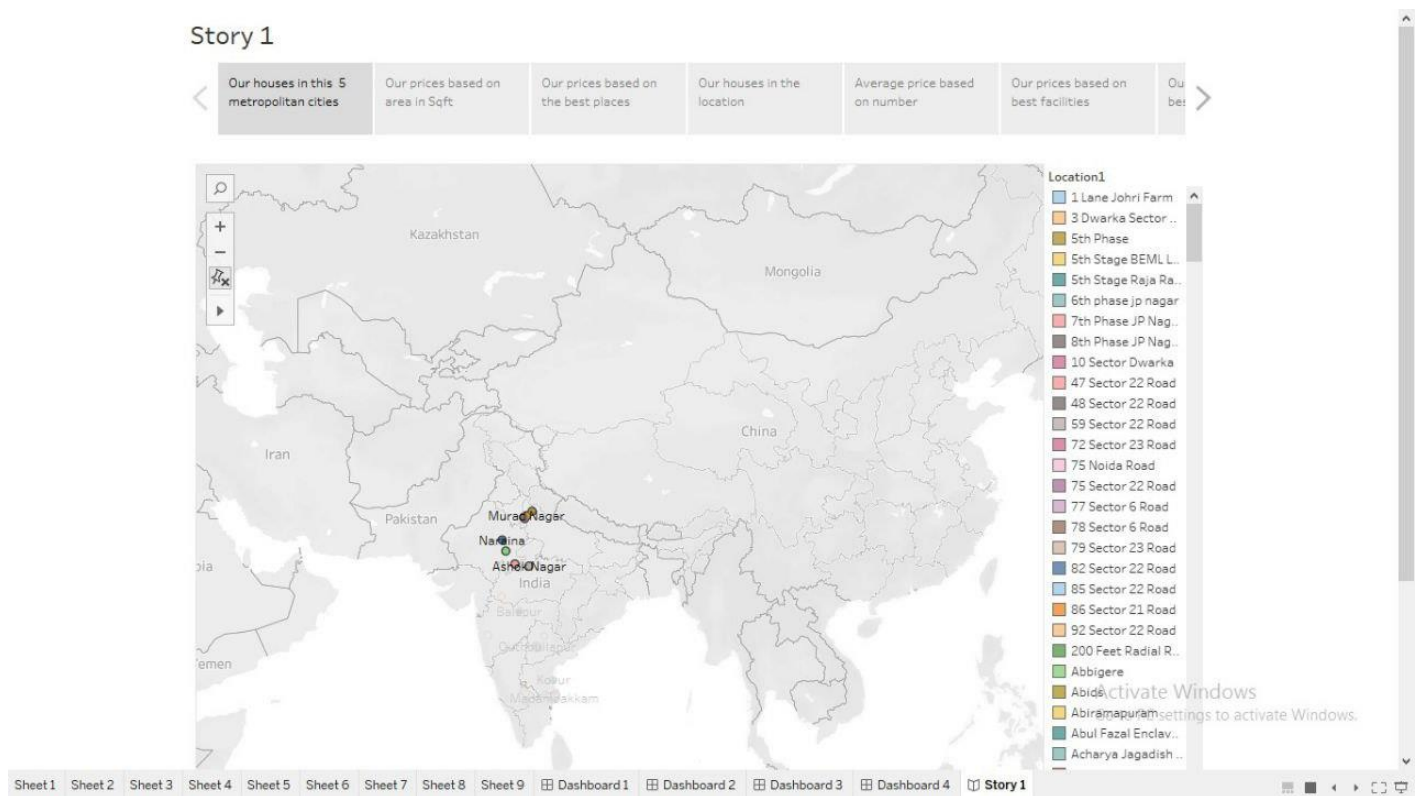
Dashboard 3:



Dashboard 4:



Story:



4.ADVANTAGES AND DISADVANTAGES:

Advantages:

- I. **Data Visualization:** Tableau excels in data visualization, allowing you to create interactive and informative dashboards and charts. This is crucial for presenting housing price trends effectively.
- II. **Data Integration:** Tableau can easily connect to various data sources, including databases and spreadsheets, making it convenient to gather and analyze diverse datasets related to housing prices.
- III. **Geographic Analysis:** Tableau supports geographic mapping, which is valuable for visualizing housing price variations across different areas within metropolitan regions.
- IV. **Interactivity:** You can create interactive dashboards that allow users to filter, drill down, and explore housing data, providing a more engaging and insightful experience.
- V. **Predictive Analytics:** Tableau supports predictive modeling, which can be used to forecast future housing price trends based on historical data.

Disadvantages:

- I. **Learning Curve:** Tableau can be complex for beginners. It may take time and effort to become proficient in using its features effectively.
- II. **Cost:** Tableau is a paid software, and licensing costs can be significant, especially for organizations with a large user base.
- III. **Performance Issues:** Handling large datasets in Tableau can sometimes lead to performance issues, requiring optimization and hardware resources.
- IV. **Limited Advanced Analytics:** While Tableau offers basic predictive analytics, it may not be as robust as specialized data science tools for in-depth modeling and analysis.
- V. **Data Security:** Ensuring data security and compliance can be challenging when sharing sensitive housing price data through Tableau, particularly in a collaborative environment.

APPLICATIONS:

- I. **Real Estate Investment:** Investors can use this analysis to identify lucrative real estate investment opportunities in metropolitan areas with potential for property value appreciation.
- II. **Housing Market Research:** Real estate developers and market researchers can gain insights into market trends and demand patterns, helping them make informed decisions about construction and development projects.
- III. **Government Policy:** Governments and municipal authorities can use this data to formulate housing policies, urban planning, and infrastructure development initiatives to address affordability and housing shortages.
- IV. **Banking and Finance:** Banks and financial institutions can assess the creditworthiness of borrowers based on the property's location and estimated value, helping them make lending decisions.
- V. **Insurance Industry:** Insurance companies can use housing price data to determine property insurance rates, considering the risk associated with different areas.

6.CONCLUSION:

The analysis of housing prices in metropolitan areas of India yields several significant conclusions. It highlights substantial regional variations in property values, underlining the influence of factors like location, infrastructure development, and demand-supply dynamics. This analysis also draws attention to affordability challenges in specific areas, prompting considerations for policy interventions. Investors can use the findings to identify promising investment opportunities, while policymakers can craft data-driven housing policies. Moreover, the project underscores the economic significance of the real estate sector and the power of data analytics in decision-making. Overall, it offers valuable insights into housing market dynamics, informing stakeholders as they navigate India's diverse metropolitan real estate landscape.

7.FUTURE SCOPE:

- I. **Advanced Predictive Modeling:** Enhance the project by incorporating more advanced predictive modeling techniques to forecast housing price trends with greater accuracy. Machine learning algorithms and time-series analysis can be used to make future predictions based on historical data.
- II. **Dynamic Data Updates:** Implement a system for real-time or periodic updates of housing price data. This would ensure that the analysis remains relevant and up-to-date, providing users with the latest market insights.
- III. **Incorporate Socioeconomic Data:** Integrate socioeconomic data such as income levels, employment rates, and demographic trends to gain a deeper understanding of the factors influencing housing prices and their impact on communities.
- IV. **Geospatial Analysis:** Expand geospatial analysis capabilities to provide more detailed insights into neighborhood-level price variations. Geographical information systems (GIS) can help visualize these variations effectively.
- V. **User-Friendly Mobile App:** Develop a user-friendly mobile application that allows homebuyers, investors, and researchers to access and interact with the housing price data on the go, providing a valuable tool for decision-making.