9.2 <u>Disadvantages</u>

✞ **Disadvantages of a Tableau Housing Market Project**

- **Data Limitations and Outdated Information:** Housing data is dynamic, and static datasets (e.g., 2014-2015 data) may not reflect current market conditions. Missing external data (like mortgage rates or crime rates) limits comprehensive analysis.

- **Intensive Data Pre-processing:** The Knowledge Academy reports that Tableau is primarily a visualization tool, often requiring extensive, time-consuming data cleaning and transformation in external tools (like SQL or Python) before ingestion.

- **Manual Formatting and Maintenance:** The software requires manual formatting, which is tedious, and parameters are static, meaning they do not automatically update, as explained in Mind bowser's analysis of Tableau.

- **Oversimplification and Misinterpretation:** Complex housing factors can be oversimplified in visualizations, potentially leading to incorrect conclusions. Improperly built visualizations might not accurately represent the data.

- **High Licensing and Training Costs:** Tableau is expensive, making it less accessible for small-scale projects, note Sam Solutions and Smart Solutions.

- **Outlier Influence:** As shown by Raymond Ng's analysis, outliers can disproportionately impact, and thus mislead, the overall trends shown in visualizations.

⊙ Disadvantages of This Project

While this Tableau housing market analysis project offers strong insights and visualization benefits, it also has several limitations and potential drawbacks. Below is a structured explanation suitable for academic reports or presentations.

1. Data Dependency & Quality Issues

⚠ Accuracy Depends on Data Quality

- Incomplete records (missing sale prices or features)
- Duplicate entries
- Incorrect property details
- Outdated market information

If the dataset is inaccurate, visualizations may lead to misleading conclusions.

2. Limited Historical or External Data

The analysis may not include:

- Economic indicators (inflation, interest rates)
- Mortgage rate trends
- Government housing policies
- Employment rates

Without external factors, price trends may be oversimplified.

3.Performance Issues with Large Datasets

When working with large housing datasets:

- Dashboards may load slowly
- Maps may render slowly
- Complex calculated fields may reduce performance

Performance optimization (extracts, aggregation) is required to avoid delays.

4.Maintenance & Update Challenges

If the housing dataset updates frequently:

- Dashboard must be refreshed regularly
- Extracts must be updated
- Calculations may need revision

Without maintenance, insights become outdated.
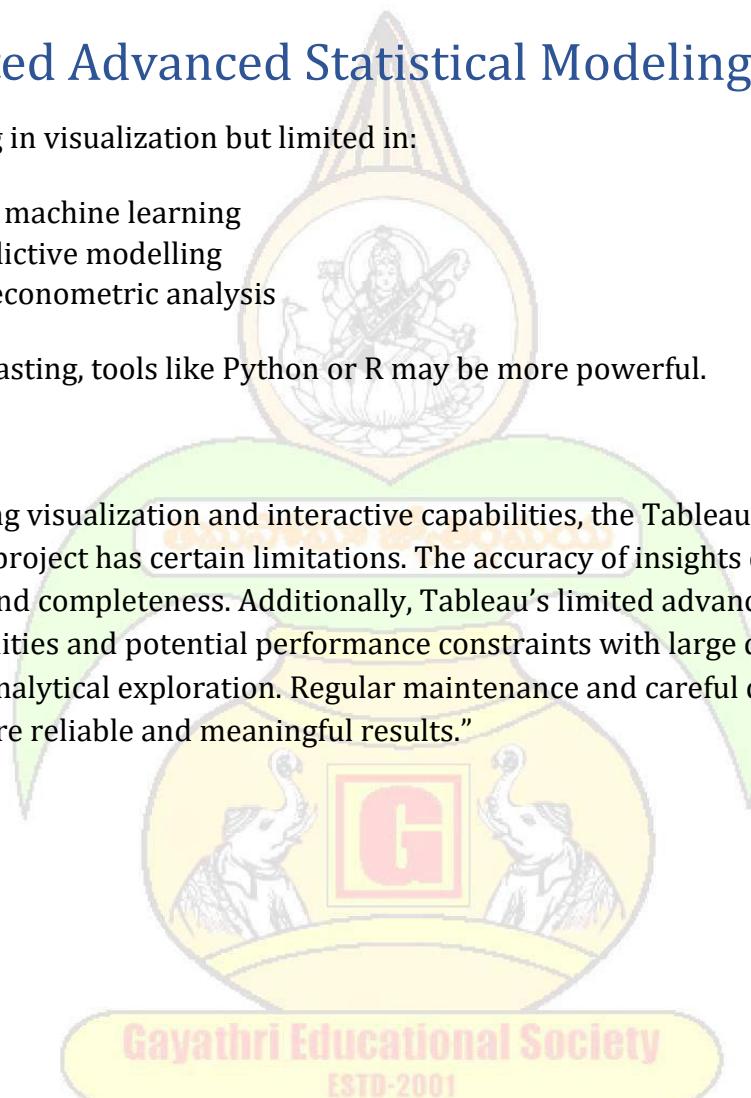
⭕ Limited Advanced Statistical Modeling

Tableau is strong in visualization but limited in:

- Advanced machine learning
- Deep predictive modelling
- Complex econometric analysis

For deeper forecasting, tools like Python or R may be more powerful.

Example

"Despite its strong visualization and interactive capabilities, the Tableau-based housing market analysis project has certain limitations. The accuracy of insights depends heavily on data quality and completeness. Additionally, Tableau's limited advanced statistical modeling capabilities and potential performance constraints with large datasets may restrict deeper analytical exploration. Regular maintenance and careful design are required to ensure reliable and meaningful results."