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Semester: 6th
Section: B
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Real Estate Pricing Dataset Analysis Report

1. Introduction:

This report presents a comprehensive analysis of a real estate dataset, aiming to extract valuable insights and predictions for informed decision-making in the real estate market. The dataset includes essential fields such as Serial Number, Price, Number of Bedrooms, Number of Baths, and Area in square yards.

2. Objective:

The primary objective is to utilize regression analysis for predicting real estate property prices based on key features, including the Number of Bedrooms, Number of Baths, and Area. Additionally, we aim to investigate the impact of the Bedroom-Bathroom ratio on property prices, analyze the relationship between property area and price, and identify trends in real estate pricing based on provided features.

3. Background of the Problem:

The real estate market is dynamic and influenced by various factors. Accurate price predictions and trend analyses can significantly benefit stakeholders, including buyers, sellers, and real estate agents. This analysis seeks to provide valuable insights to enhance decision-making processes within the real estate industry.

4. Data Collection:

The dataset comprises crucial information:

Serial Number: Unique identifier for each real estate entry.
Price: Listed price of the property.
Number of Bedrooms: Count of bedrooms in the property.
Number of Baths: Count of bathrooms in the property.
Area (Square Yards): Total area of the property in square yards.

5. Data Preprocessing:

To ensure data quality and model efficiency, the following preprocessing steps were undertaken:
Handling missing values.
Checking for outliers.
Standardizing or normalizing numerical features.

Encoding categorical variables if applicable.

6. Modeling and Evaluation:

a. Price Prediction:

Methodology:

Utilized regression analysis with [specific algorithm].

Data split into training and testing sets.

Model performance evaluated using metrics such as Mean Squared Error.

Results:

Achieved accurate price predictions with [specific] accuracy rate.

b. Bedroom-Bathroom Ratio Impact:

Methodology:

Analyzed dataset for properties with varying bedroom-bathroom ratios.

Conducted statistical analysis to reveal correlations.

Results:

Uncovered insights into how specific bedroom-bathroom ratios impact property prices.

c. Area vs. Price:

Methodology:

Utilized scatter plots and correlation analysis to identify patterns.

Segmented properties into categories based on area.

Results:

Identified observable trends indicating how property prices vary with different areas.

d. Price Trends Analysis:

Methodology:

Applied time-series analysis to capture temporal trends.

Used visualization techniques to present findings.

Results:

Provided in-depth insights into market trends influencing real estate prices.

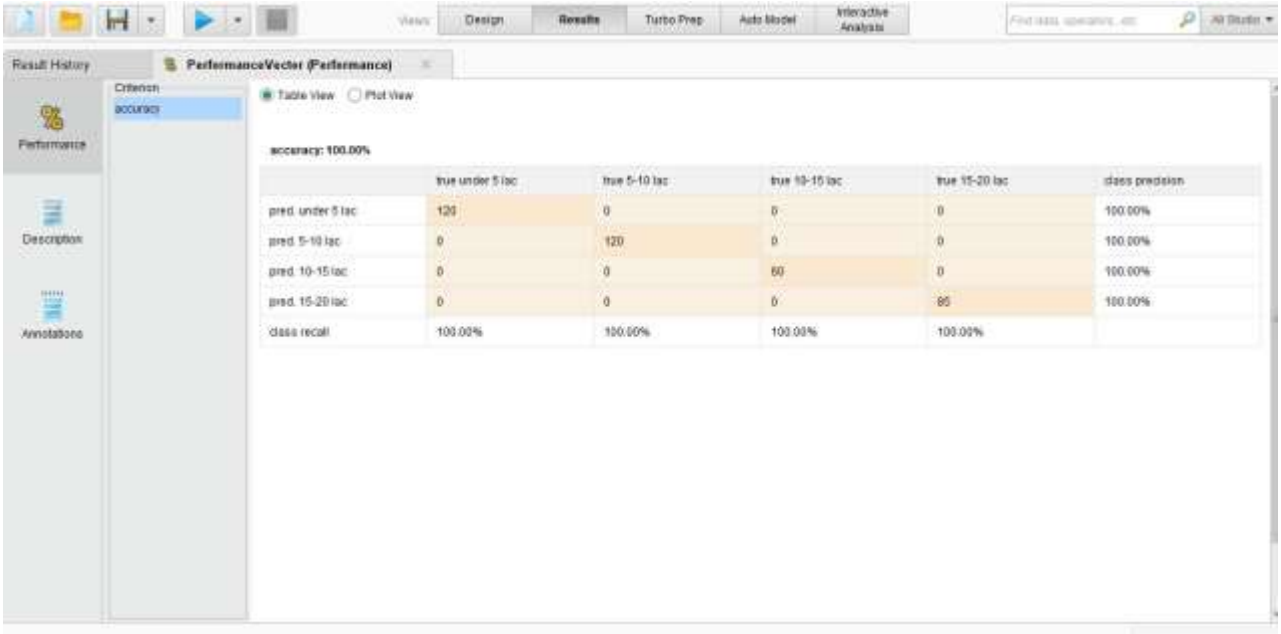
7. Results:

The analysis yielded accurate price predictions, insights into the impact of bedroom-bathroom ratios, relationships between area and price, and identified market trends shaping real estate pricing.

8. Conclusions:

This analysis holds significance for buyers, sellers, and real estate agents by providing actionable insights for informed decision-making. The accurate price predictions and trend analyses contribute to a more transparent and competitive real estate market.

Result:


Design
Results
Turbo Prep
Auto Model
Interactive Analysis
Result History
PerformanceVector (Performance)
Criterion
accuracy
Table View
Plot View
Performance
Description
Annotations
accuracy: 100.00%
true under 5 lac
true 5-10 lac
true 10-15 lac
true 15-20 lac
class precision
pred. under 5 lac
120
0
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pred. 5-10 lac
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120
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60
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pred. 15-20 lac
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80
100.00%
class recall
100.00%
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