Bias Detection Report

Property Bias Detection Report

This report analyzes the distribution bias related to the type of property owned in the dataset provided.

Dataset Information

- **File Path**: source_files/Statlog.csv

- **Relevant Feature**: Property

Bias Type

- **Type**: Distribution

Methods and Findings

1. **Max/Min Ratio Analysis**

   - Result: 2.16

   - Interpretation: Indicates minimal bias. Bias level can be considered low as the ratio is slightly above 2.

2. **Shannon Entropy Analysis**

- Entropy: 1.95

- Normalized Entropy: 0.97

- Interpretation: Very close to 1, suggesting a minimal bias in distribution.

3. **Gini Index Analysis**

- Corrected Gini Index: 0.73

- Adjusted Gini Index: 0.98

- Interpretation: Also indicates minimal bias as the Adjusted Gini Index is close to 1.

4. **Relative Risk Analysis**

- Normalized Bias Score: 2.16

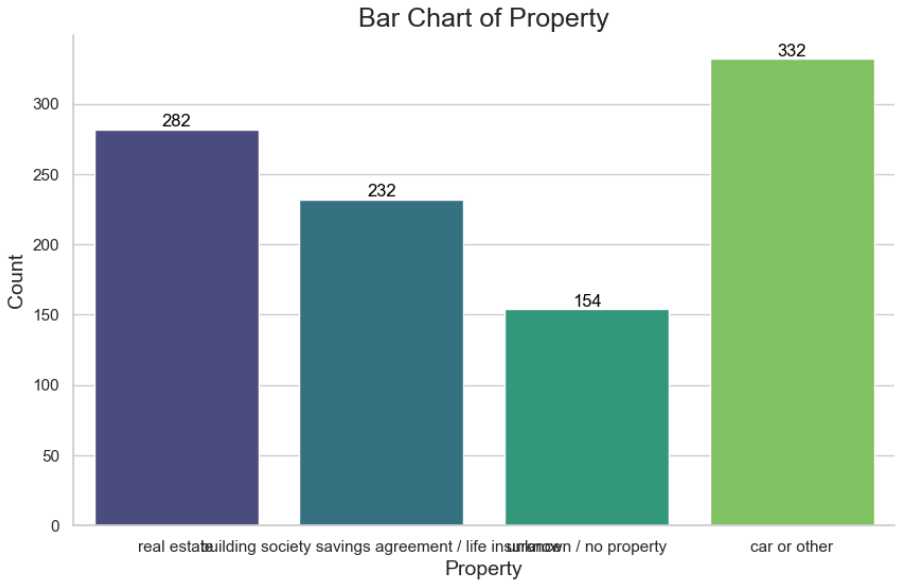
- Interpretation: Slight bias in the distribution of property types.

5. **Chi-Square Test**

- Chi-Square Statistic: 0.53

- P-value: 0.91

- Interpretation: High p-value suggests no significant bias in the property distribution.



Conclusion

The analysis indicates that the distribution of property types in the dataset shows a minimal level of bias. The metrics used, including Shannon Entropy, Gini Index, and the Chi-Square test, all support this conclusion. The dataset is suitable for use with minimal attention to specific scenarios where property type may play a critical role.