

Bias Detection Report

Bias Detection Report for Marital Status Distribution

Dataset Analyzed

- Path: source_files/COMPAS.csv

Relevant Feature

- MaritalStatus

Bias Type

- Distribution

Analysis Results

1. **Shannon Entropy and Balance Metric**

- Shannon Entropy: 1.3035

- Balance Metric: 0.4643

- Bias Level: Significant Bias

2. ****Max/Min Ratio****

- Ratio: 211.8592
- Bias Level: Extreme Bias

3. ****Gini Index****

- Corrected Gini Index: 0.4265
- Adjusted Gini Index: 0.4976
- Bias Level: Significant Bias

4. ****Relative Risk and Normalized Bias Score****

- Normalized Bias Score: 211.8592
- Relative Risks:
 - Single: 5.1918
 - Married: 0.9402
 - Divorced: 0.4463
 - Separated: 0.2074
 - Significant Other: 0.1450
 - Widowed: 0.0449

- Unknown: 0.0245

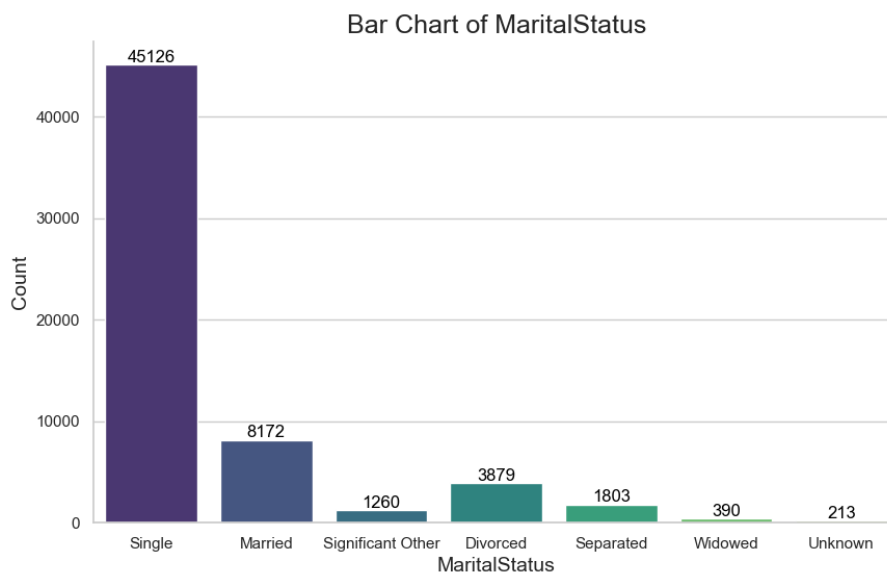
- Bias Level: Extreme Bias

Conclusion

The analysis shows significant and extreme biases in the distribution of marital status categories, with the "Single" category being overrepresented. Consider reassessing the dataset or applying corrective measures.

Recommendations

- Re-evaluate representativeness.
- Consider corrective actions for imbalance.



Pie Chart of MaritalStatus

