

Bias Detection Report

Gender Balance Analysis Report

Bias Type: Distribution

Relevant Feature(s): Sex_Code_Text

Bias Detection and Analysis Results

1. ****Shannon Entropy and Balance Metric:****

- Shannon Entropy: 0.758

- Balance Metric: 0.758

- ****Interpretation:**** The balance metric indicates a moderate level of balance in the gender distribution.

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

- Max/Min Ratio: 3.565

- ****Interpretation:**** A max/min ratio of 3.565 indicates a moderate level of imbalance.

3. **Entropy:**

- Normalized Entropy: 0.758
- **Interpretation:** This normalized entropy value suggests moderate balance.

4. **Gini Index:**

- Adjusted Gini Index: 0.684
- **Interpretation:** Moderate level of inequality in the distribution.

5. **Chi-Square Test:**

- Significant deviation from a uniform distribution.

Visualization

- The bar chart and pie chart confirm the numerical findings, showing a visible imbalance.

Conclusion

The gender distribution shows a moderate level of bias. Consider balancing or accounting for this bias in your analysis.

Recommendations

- Balance the dataset or account for the bias in analysis.

