

Bias Detection Report

Bias Detection Report for Language Feature in COMPAS Dataset

Dataset Analyzed

- Filename: COMPAS.csv

Features Examined

- Language

Types of Bias Detected

- Distribution Bias

Tools Used

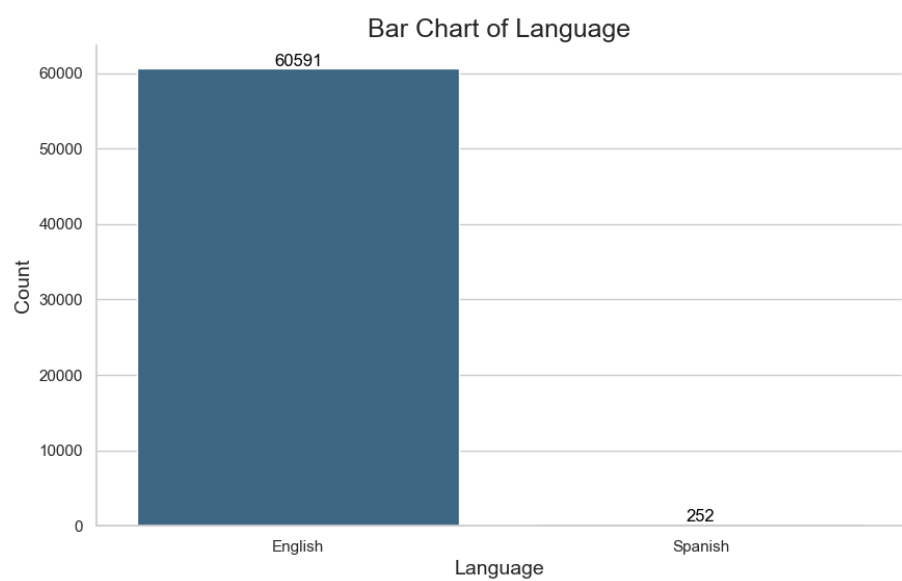
- Shannon Entropy & Balance Metric
- Gini Index
- Max/Min Ratio
- Jensen-Shannon Divergence

Values Obtained and Extent of the Bias

- Shannon Entropy: 0.0387
- Balance Metric: 0.0387
- Corrected Gini Index: 0.0083
- Adjusted Gini Index: 0.0166
- Max/Min Ratio: 240.44
- Jensen-Shannon Divergence: 0.2046

Visualizations

- Bar Chart - Language Distribution



Interpretation of Bias Severity

- The Language feature exhibits extreme distribution bias, as indicated by the results from the Max/Min Ratio and Balance metric methods.

Recommendations

- Consider revisiting the dataset's application in contexts where language representation may significantly impact outcomes or fairness.

Additional Explanation

- The extreme bias in the language distribution suggests a need for careful evaluation of the dataset, particularly in decision-making processes that involve language as a variable.