Bias Detection Report

Bias Detection Report for Gender Impact on Decision-Making/Opportunity Access

Dataset Analyzed

- **Source**: source_files/Adult.csv

- **Features Examined**: 'sex' and 'income'

Types of Bias Detected

- **Bias Type**: Correlation

- **Relevant Features**: 'sex' and 'income'

Tools and Methods Used

- **Toolset Methods**: Cramér's V, Elift, Lipschitz Function

- **Reference Methods**: Chi-Square Test, HSIC

Analysis Results

- **Cramér's V**: 0.216 (Moderate association)

- **Elift**: 1.27 (Minimal correlation bias)

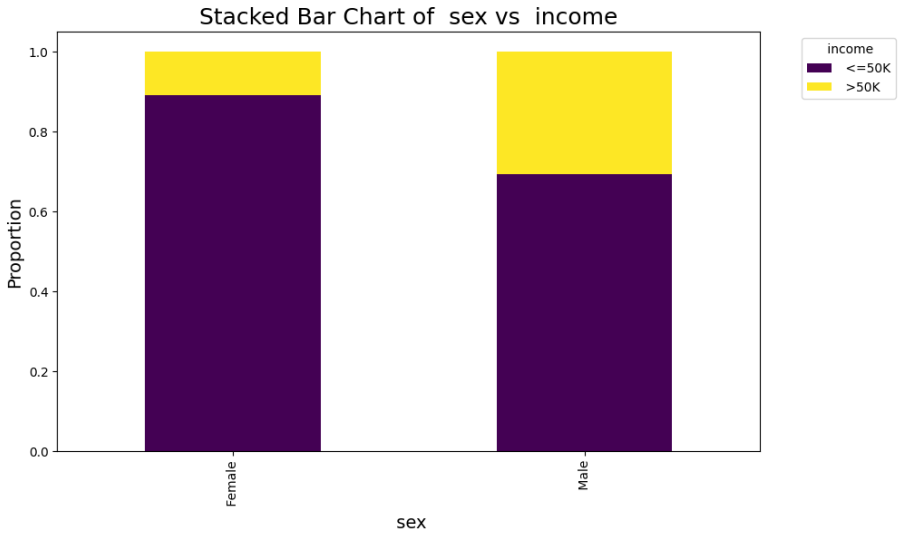
- **Lipschitz Function**: 0.31 (Moderate bias)

- **Chi-Square Statistic**: 1517.81 (Significant association)

- **HSIC Value**: ~0 (No significant numerical correlation bias)

Visualizations

- The following visualization supports the analysis:



Interpretation

The analysis demonstrates a moderate level of bias between 'sex' and 'income' in categorical terms, according to the Chi-Square test, while the HSIC suggests no significant numerical correlation bias.

Recommendations

- Consider the identified biases in decisions related to opportunity access and decision-making.

- The dataset can be utilized with careful consideration of the observed biases, particularly in categorical contexts.