

Bias Detection Report

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Analyzed Dataset

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

Features Examined

- **Native Country**

- **Income**

Types of Bias Detected

- Correlation Bias

Tools and Methods Used

1. **Pearson's Chi-square Test**

- Statistic: 317.23

- p-value: 2.21e-44

2. **Cramér's V Analysis**

- Value: 0.0987

3. **Elift Analysis**

- Max Elift: 1.7383

4. **Statistical Parity Analysis**

- Max Z-value: 0.5632

Values Obtained and Extent of Bias

- **Chi-square Test** indicates a significant correlation bias.
- **Cramér's V** shows a weak correlation.
- **Elift Analysis** suggests moderate correlation.
- **Statistical Parity** indicates moderate differences in income distribution.

Visualizations

Below is a stacked bar chart that visualizes the distribution of income across different native countries.

Recommendations

Based on the analysis, there is a moderate level of correlation bias between native country and income. Consider this bias when using the dataset for decision-making processes.

