Bias Detection Report

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Dataset Analyzed

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

Features Examined

- **Education**

- **Race**

Bias Type

- **Correlation**

Tools and Methods Used

- **Cramér's V**: Measures the association between two categorical variables.

- **Elift**: Provides a ratio of confidence levels to detect potential bias.

- **Statistical Parity and Z-scores**: Examines differences in proportions.

Analysis Results

- **Cramér's V**: 0.0749 (Minimal Bias)

- **Max Elift**: 6.437 (Extreme Bias)

- **Max Z-value**: 0.498 (Moderate Bias)

Visualization

- A stacked bar chart illustrating the distribution of education levels across races was created.

Recommendations

The analysis reveals a significant correlation between education and race, especially highlighted by the Elift measure. The dataset may require adjustments or additional scrutiny to ensure fairness and accuracy in its applications.