

Bias Detection Report

Bias Detection Report for Education and Gender

Dataset Analyzed:

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

Features Examined:

- **Education Level** (`education`)
- **Gender** (`sex`)

Bias Type:

- **Correlation**

Relevant Features:

- Education Level
- Gender

Analysis Results:

1. **Cramér's V Correlation**:

- Result: 0.0956
- Bias Level: Minimal Bias
- Interpretation: Weak association indicating minimal correlation bias.

2. **Statistical Parity**:

- Max Z-value: 0.3636
- Bias Level: Moderate Bias
- Interpretation: Some variations in education distributions across genders.

3. **Chi-Square Test**:

- Analysis was attempted but unable to retrieve results due to execution errors.
- Based on Cramér's V, similar minimal association can be assumed.

Visualization:

- A stacked bar chart is provided showing the distribution of education levels across genders.

Recommendations:

- The dataset exhibits minimal to moderate bias. There are some correlation variations, but they are not substantial.
- You may proceed with using the dataset, considering moderate variations in certain applications.

