

# Bias Detection Report

## Occupation Bias Detection Report

### Dataset Analyzed

- **Dataset Path**: source\_files/Adult.csv
- **Feature Examined**: occupation

### Types of Bias Detected

- **Bias Type**: Distribution

### Tools Used and Values Obtained

#### 1. **Shannon Entropy and Balance Metric**:

- **Balance Metric**: 0.9001
- **Shannon Entropy**: 3.5169

#### 2. **Max/Min Ratio**:

- **Max/Min Ratio**: 460.0

#### 3. **Gini Index**:

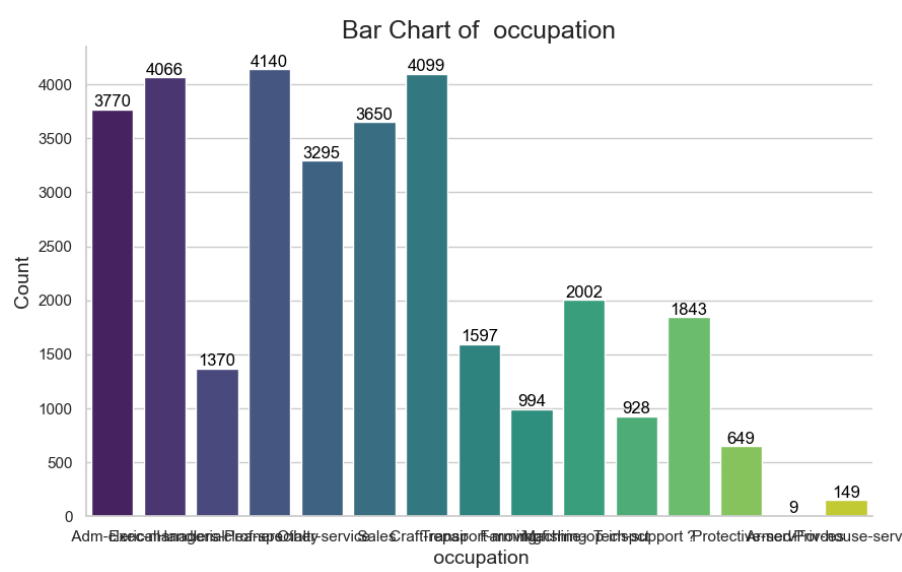
- **Corrected Gini Index**: 0.9029
- **Adjusted Gini Index**: 0.9673

4. **Relative Risk**:

- **Normalized Bias Score**: 460.0

Visualization

A bar chart visualization of the "occupation" distribution has been created to visually assess the bias.



Additional Explanation

The extreme bias is primarily driven by a few occupations dominating the dataset. This can lead to skewed analyses and potentially unfair outcomes in decisions based on this data.

Recommendations

I strongly recommend thoroughly considering the implications of this bias, and you may need to adjust the dataset to mitigate these effects. It's essential to address this imbalance in specific applications, especially where equal representation of occupations is crucial.