Bias Detection Report

Bias Detection Report: Education Distribution Analysis

1. Shannon Entropy & Balance Metric:

The Shannon Entropy is 2.931, indicating a certain amount of uncertainty or diversity in the distribution.

The Balance metric is 0.7328, suggesting a moderate level of imbalance in the distribution of education levels. According to our evaluation criteria, this places the bias at Level 3 (Moderate Bias).

2. Gini Index:

The Adjusted Gini Index is 0.8637. This value also indicates a moderate level of disparity in the distribution, categorizing the bias also at Level 3 (Moderate Bias).

3. Max/Min Ratio:

The Max/Min Ratio is 205.90, which is extremely high, suggesting an extreme disparity between the most and least common education levels. This places the bias at Level 5 (Extreme Bias).

4. Kolmogorov-Smirnov Test:

The K-S Statistic is 0.375 with a P-value of 0.2145. The statistic indicates some divergence from a uniform distribution, yet the P-value suggests that this divergence is not statistically significant at a conventional significance level (e.g., 0.05).