Bias Detection Report

Introduction:

This report presents the results of a bias detection analysis on the Adult.csv dataset.

Methods:

The following methods were used to detect bias in the dataset:

1. Chi-Square test

2. Max/Min ratio of categories' relative frequencies

3. Statistical parity

Results:

The results of the bias detection analysis are presented below:

1. Chi-Square test: The Chi-Square test revealed a significant association between the race and income features in the Adult.csv dataset.

2. Max/Min ratio of categories' relative frequencies: The max/min ratio for the race feature is 102.64206642066421, which indicates a moderate to significant bias.

3. Statistical parity: The standardized difference for the race feature is 1.990583, which indicates a significant bias.

Conclusion:

Based on the results from the Chi-Square test, max/min ratio of categories' relative frequencies, and statistical parity methods, there is a significant bias in the race feature in the Adult.csv dataset.

The bias level is Level 5, which indicates extreme bias.