Bias Detection Report

Bias Detection Report for Age Feature in COMPAS Dataset

1. **Skewness Analysis**: The skewness value was found to be -0.902, indicating a moderately skewed distribution. This corresponds to Level 3 bias.

2. **Kurtosis Analysis**: The kurtosis value was found to be -1.039, suggesting a flatter than normal distribution, which corresponds to Level 5 bias.

3. **Outlier Analysis**: No outliers were detected, indicating Level 1 bias.

4. **Cohen's d Analysis**: The Cohen's d value was -2.287, indicating a significant effect size and Level 5 bias.

5. **Quantile Deviation Analysis**: The quantile deviation was 0.085, corresponding to Level 1 bias.

Conclusion

- The Age feature in the COMPAS dataset exhibits a significant degree of bias as indicated by the skewness, kurtosis, and Cohen's d analyses.

- The absence of outliers and the quantile deviation suggest minimal distribution issues, but the overall bias is significant.