Bias Detection Report

Bias Detection Report for Student Performance Dataset

1. Dataset Analyzed: Student Performance

2. Features Examined: 'address' (categorical) and 'G3' (numerical)

3. Bias Type: Correlation

4. Tools and Methods Used:

- Max Absolute Mean Correlation
- Cohen's d Effect Size
- Standardized Difference
- Hilbert-Schmidt Independence Criterion (HSIC)

Results and Interpretation:

1. Max Absolute Mean Correlation:

- Result: 0.1975
- Interpretation: Minimal correlation bias.

2. Cohen's d Effect Size:

- Result: 0.2550

- Interpretation: Minimal effect size, indicating a small correlation bias.

3. Standardized Difference:

- Result: -0.3013

- Interpretation: Moderate level of bias, indicating some differences.

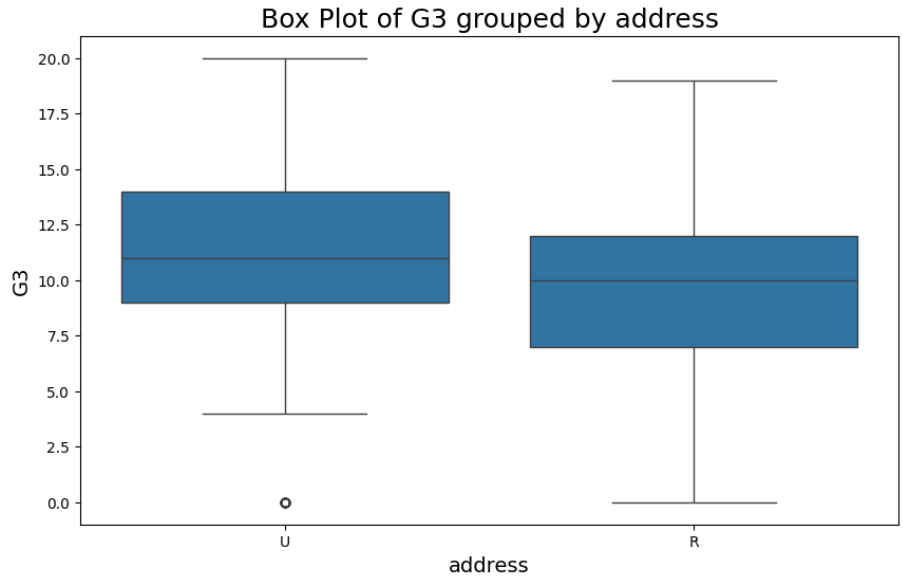
4. HSIC Value:

- Result: 5.1973e-07

- Interpretation: No significant correlation bias.

Overall Bias Level: Minimal Bias

The dataset shows no substantial bias concerning the location of students and their final grades.



Recommendations:

- The dataset is suitable for further analysis or modeling without substantial concerns about bias between location and final grades.