

Bias Detection Report

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Analysis of Correlation between Foreign Workers and Credit History

Dataset

The dataset analyzed is located at `source_files/Statlog.csv`. The relevant features extracted and examined are "foreign worker" and "Credit history".

Bias Type

Correlation

Relevant Features

- Foreign Workers ("foreign worker")
- Credit History ("Credit history")

Results

The following methods were used for analysis:

- **Cramér's V**: 0.0701 (Minimal Bias)

- **Elift**: 1.3513 (Minimal Bias)
- **Statistical Parity**: Z-value of 0.3106 (Moderate Bias)
- **Lipschitz Function**: Delta value of 0.3106 (Moderate Bias)
- **Total Variation Distance**: 0.1100 (Minimal Bias)
- **Chi-Square Test**: Significant p-value of 0 (Significant Bias)

Interpretation

- Minimal to moderate correlation bias is observed using various methods.
- The Chi-Square test indicates significant statistical association, suggesting a potential bias in the dataset regarding foreign workers and their credit history.

Recommendations

Given the analysis, there is potential bias between foreign workers and credit history in the dataset. It's recommended to consider these findings during analysis and decision-making processes.