Bias Detection Report

Analysis Summary:

1. **Bias Type:** Distribution

2. **Relevant Feature(s):** Status of existing checking account

Detailed Findings:

- **Shannon Entropy and Balance Metric:**

  - **Balance Metric:** 0.901, indicating a reasonably balanced distribution with minimal bias.

- **Max/Min Ratio:**

  - **Ratio:** 6.25, suggesting a noticeable difference between the most and least common categories, indicating moderate bias.

- **Entropy Analysis:**

  - **Normalized Entropy:** 0.901, which indicates that the distribution is fairly balanced but not perfectly uniform.
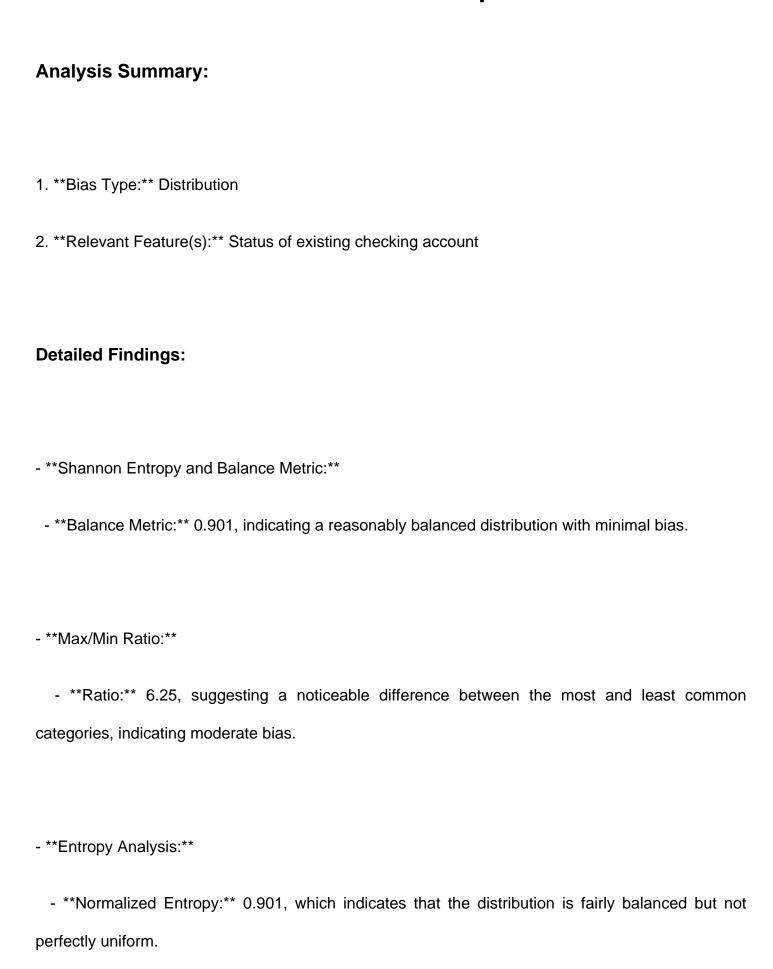
- **Gini Index:**

  - **Adjusted Gini Index:** 0.924, falling into Level 2, indicating minimal bias.

- **Relative Risk:**

  - **Normalized Bias Score:** 6.25, indicating a moderate level of bias with some categories being more prevalent than others.

Conclusion:

- The distribution of checking account statuses in your dataset shows a moderate level of bias. Some categories are more common than others, and this bias may need to be considered in specific applications where a balanced representation is critical.

Bar Chart of Status of existing checking account