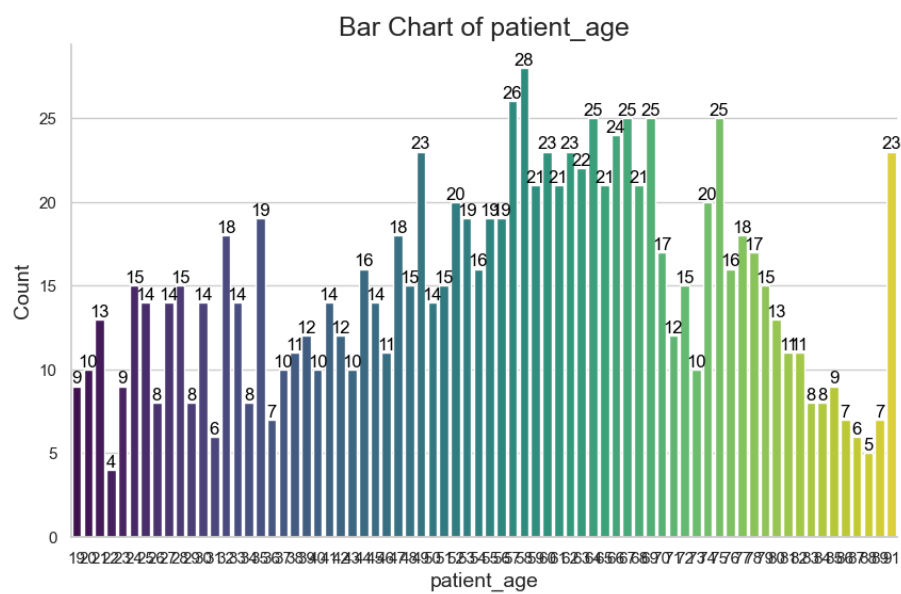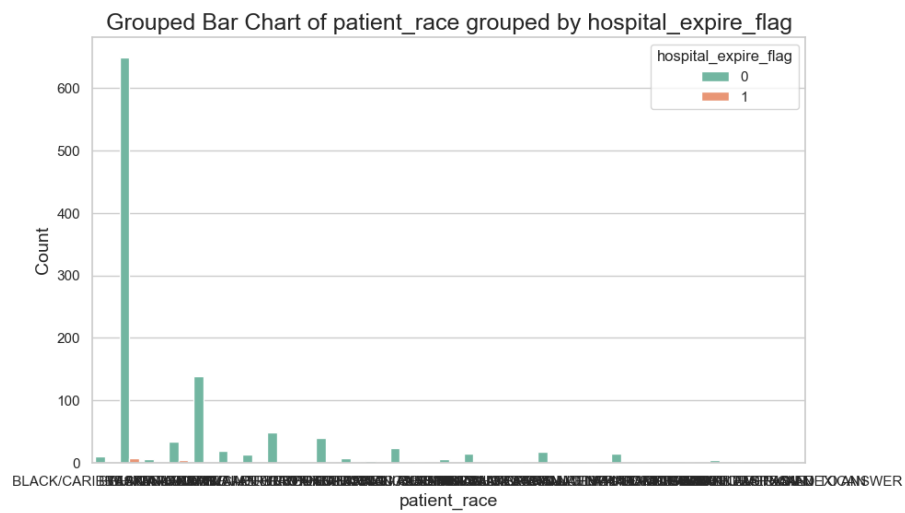# Bias Detection Report

Bias Detection Report for MIMIC-IV Dataset

Introduction: This report analyzes potential biases related to patient race in the MIMIC-IV dataset, focusing on correlations with admission type, discharge location, hospital expire flag, and age distribution.

Methodology: The analyses include Chi-Square tests for categorical features, Z-Score analysis for age distribution, and HSIC for correlation bias between categorical and numerical features.

Results and Interpretation: The Chi-Square tests revealed a significant association between patient race and hospital expire flag, suggesting potential bias. The Z-Score analysis indicated notable age distribution deviations in some racial categories. The HSIC analysis showed minimal correlation bias between race and age.

Grouped Bar Chart of patient_race grouped by hospital_expire_flag

Recommendations: Based on the findings, it is recommended to further investigate the factors contributing to the bias detected in hospital expire flags and consider interventions to ensure equitable care across all racial groups.