Bias Amplification Report

Study: Bias Amplification Study

The study is designed to sysmatically amplify model bias by quantitative misrepresentation. The approach can produce models with different degrees of bias, which facilitates a systematic evaluation on bias mitigation methods.
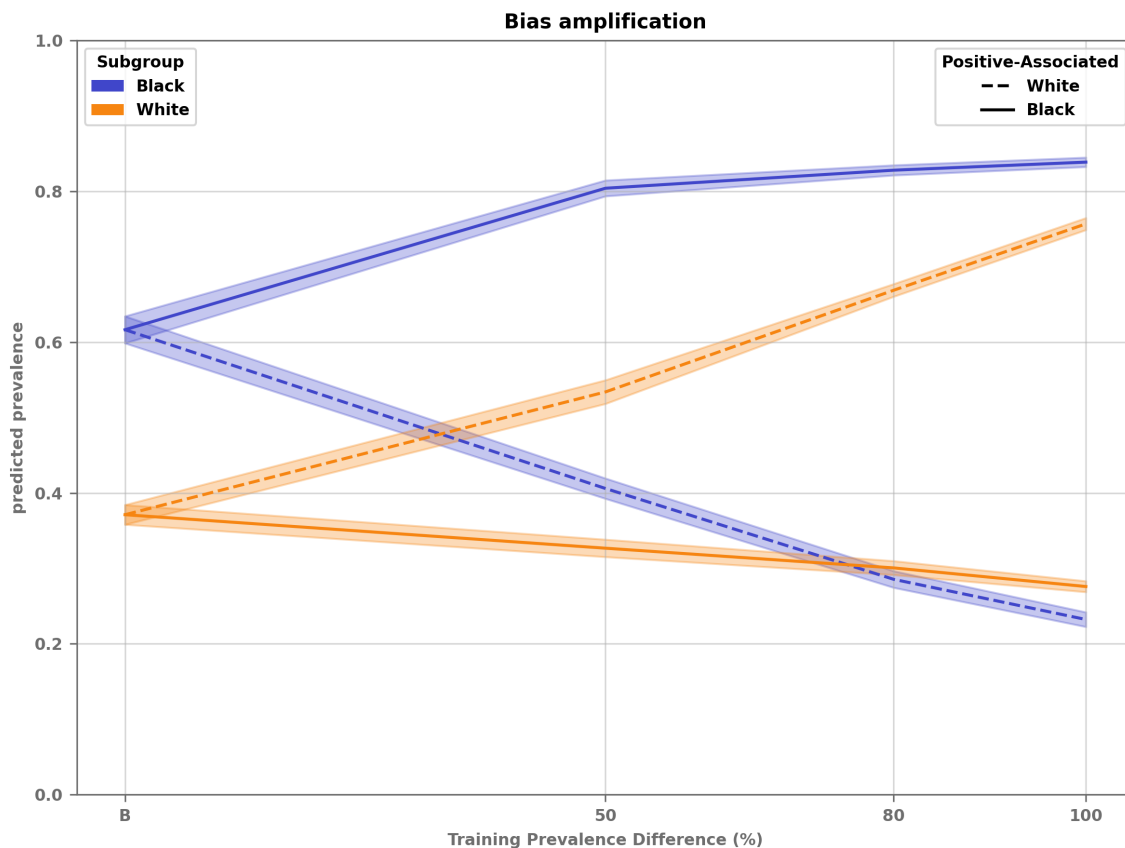
Bias Ampilification Approach: Quantitative Misrepresentation

The quantitative misrepresentation approach applies data selection prior to training so that the disease prevalence is different for different patient subgroups. Additional controls over the degree to which bias is amplified is taken by the amount of prevalence difference between subgroups.
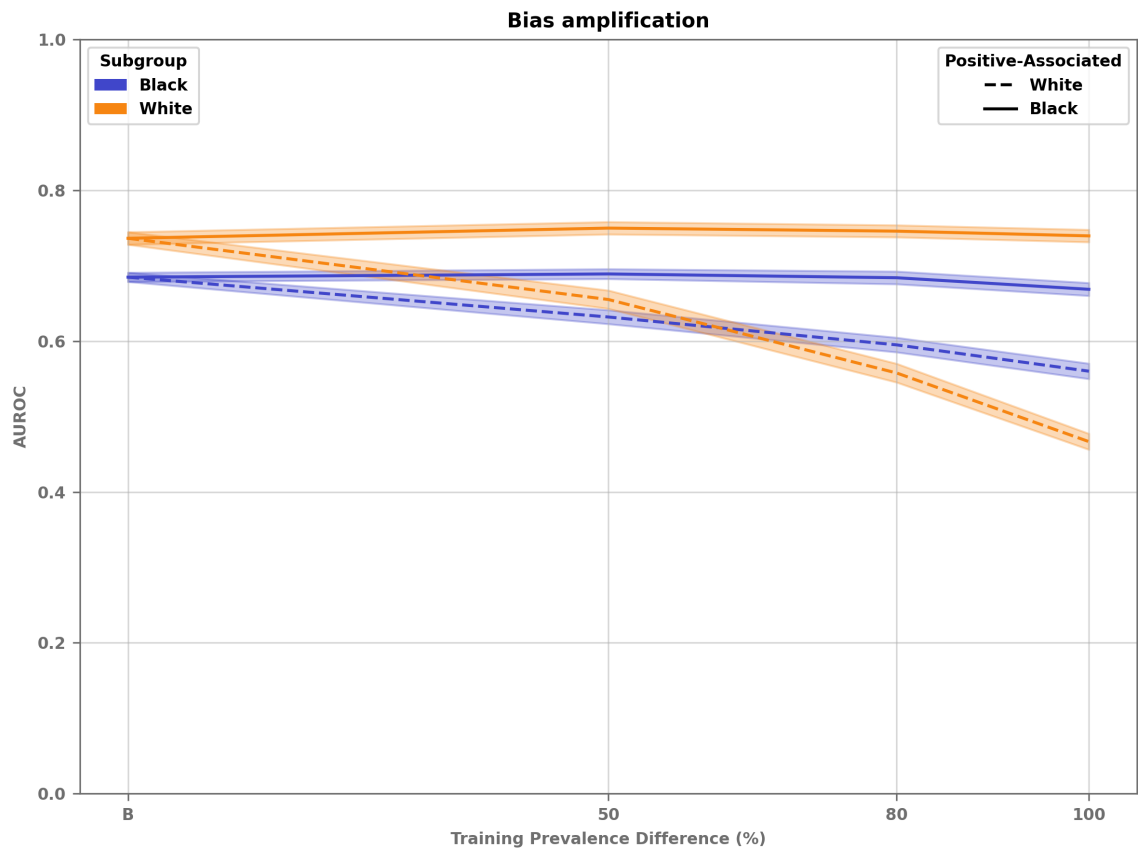
Results

Each figure under this section presents one metric result respectively. For these experiments, the positive-associated subgroup refers to the subgroup with the higher disease prevalence in the training set. The x-axis indicates the subgroup disease prevelance difference in the training set, while B indicates the baseline model.

1. predicted prevalence

2. AUROC

Bias amplification

Report Metadata

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