S3: Single-Attribute Subgroup Size and Accuracy

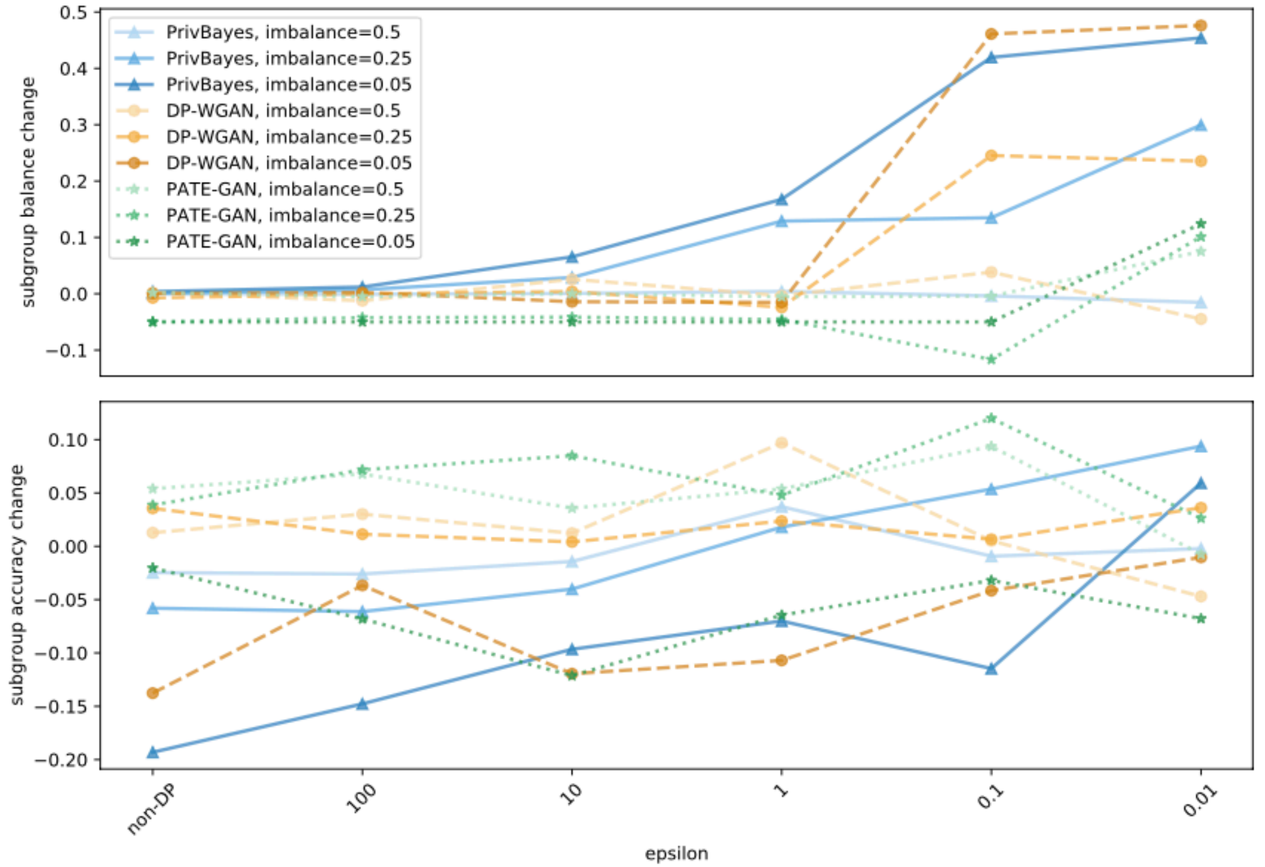
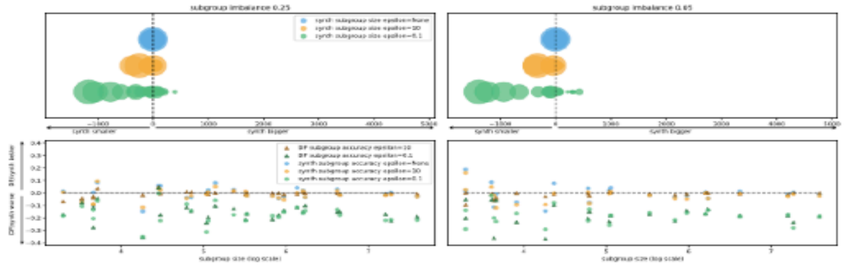
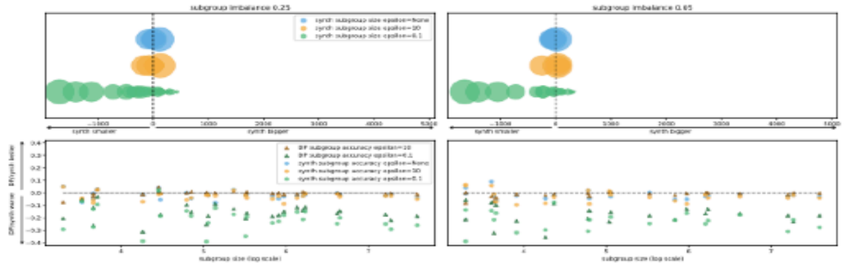


Figure 5: Minority single-attribute (sex) subgroup imbalance level change (top), minority subgroup drop in accuracy vs. majority (bottom) for different subgroup imbalance and ϵ levels, ***Texas***.

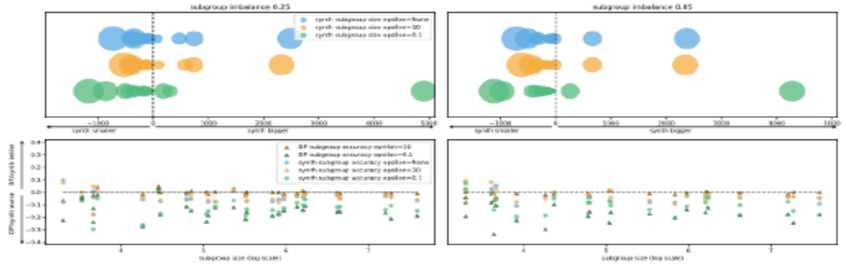
S4: Multi-Attribute Subgroup Size and Accuracy



(a) PrivBayes

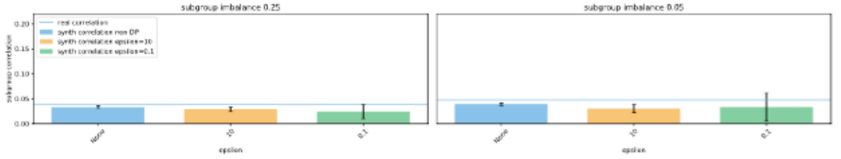


(b) DP-WGAN

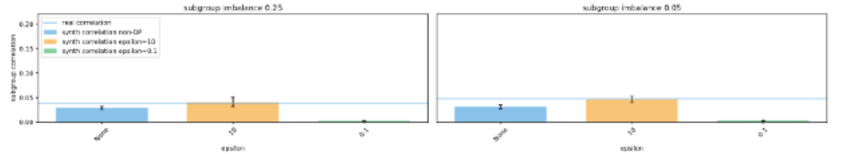


(c) PATE-GAN

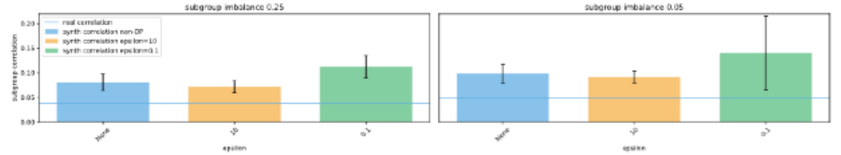
Figure 13: Size of synthetic data multi-attribute subgroup (intersection of age, sex, and race) relative to real (top) and accuracy of DP and synthetic classifiers relative to real classifier accuracy (bottom) for different single-attribute (sex) subgroup imbalance and ϵ levels, ***Texas***.



(b) PrivBayes, Texas



(d) DP-WGAN, Texas



(f) PATE-GAN, Texas

Figure 14: Mutual information between the multi-attribute subgroup and the target (income/length of stay) columns for different single-attribute subgroup imbalance (sex) and ϵ levels, ***Adult*** (left) and ***Texas*** (right).