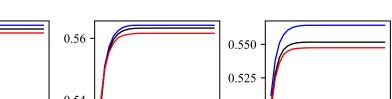


Figure 1: Dynamics of group-wise loss disparity for **ACSIncome-CA** data when $\rho \in \{0, 1.0, 3.0\}$. When $\rho = 0$, the policy is just RERM It is clear that when ρ becomes larger, the groupwise loss disparity becomes lower.

 $- \rho = 1.0$

 $\rho = 0$



 $\rho = 3.0$

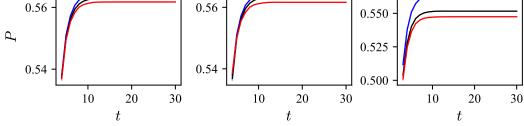


Figure 2: The evolution of majority group for **ACSIncome-CA** data when $\rho \in \{0, 1.0, 3.0\}$. When $\rho = 0$, the policy is just RERM. It is clear that when ρ becomes larger, the group fraction becomes lower.

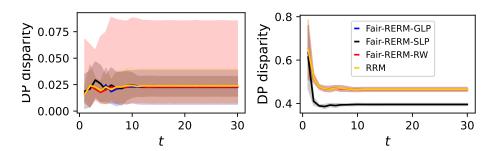


Figure 3: Demographic parity disparity for 2 classification tasks.