Table 6. Experimental results on `Adult` dataset, along with the α_k values learned for each feature in subdominance minimization.

Method \ Dataset	`Adult` ($\epsilon = 0.0$)				`Adult`($\epsilon = 0.2$)			
	Prediction error	DP diff	EqOdds diff	PRP diff	Prediction error	DP diff	EqOdds diff	PRP diff
α_k	95.22	91.38	5.97	5.03	7.50	91.38	12.05	94.02
γ−**superhuman**	92%	92%	100%	100%	100%	100%	100%	84%
`MinSub-Fair` (ours)	0.214 ± 0.002	0.023 ± 0.002	0.020 ± 0.006	0.179 ± 0.001	$\mathbf{0.193 \pm 0.003}$	0.047 ± 0.006	0.028 ± 0.010	0.166 ± 0.003
`MFOpt`	$\mathbf{0.195 \pm 0.003}$	0.063 ± 0.004	0.077 ± 0.003	0.209 ± 0.006	0.319 ± 0.004	$\mathbf{0.005 \pm 0.004}$	$\mathbf{0.017 \pm 0.003}$	0.198 ± 0.007
`post_proc_dp`	0.233 ± 0.005	0.058 ± 0.007	0.205 ± 0.010	0.396 ± 0.006	0.206 ± 0.004	0.154 ± 0.007	0.070 ± 0.005	0.221 ± 0.010
`post_proc_eqodds`	0.231 ± 0.004	0.109 ± 0.006	$\mathbf{0.016 \pm 0.004}$	0.307 ± 0.007	0.197 ± 0.005	0.170 ± 0.005	0.087 ± 0.004	0.162 ± 0.009
`fair_logloss_dp`	0.282 ± 0.001	$\mathbf{0.002 \pm 0.000}$	0.076 ± 0.015	$\mathbf{0.108 \pm 0.004}$	0.383 ± 0.005	0.016 ± 0.002	0.056 ± 0.018	$\mathbf{0.142 \pm 0.005}$
`fair_logloss_eqodds`	0.256 ± 0.003	0.156 ± 0.007	0.032 ± 0.012	0.110 ± 0.004	0.377 ± 0.004	0.092 ± 0.017	0.025 ± 0.008	0.153 ± 0.017

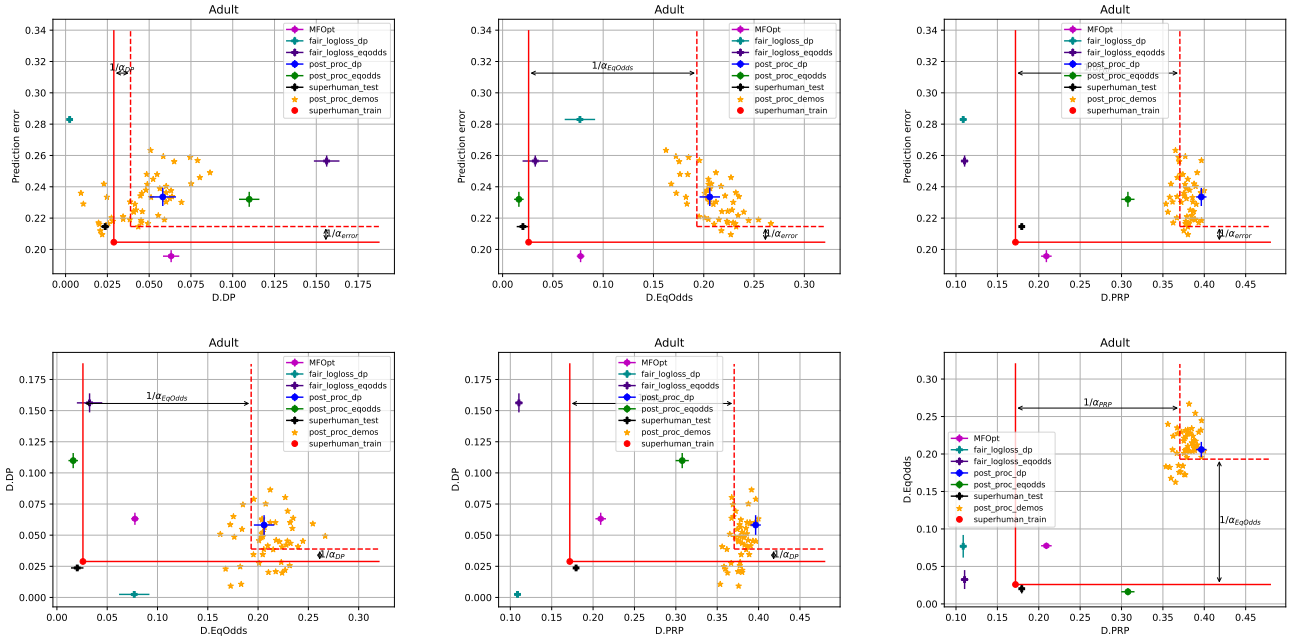

Figure 9. Prediction error versus *difference of*: *Demographic Parity* (`D.DP`), *Equalized Odds* (`D.EqOdds`) and *Predictive Rate Parity* (`D.PR`) on test data using noiseless training data ($\epsilon = 0$) for `Adult` (top row) and `COMPAS` (bottom row) datasets.

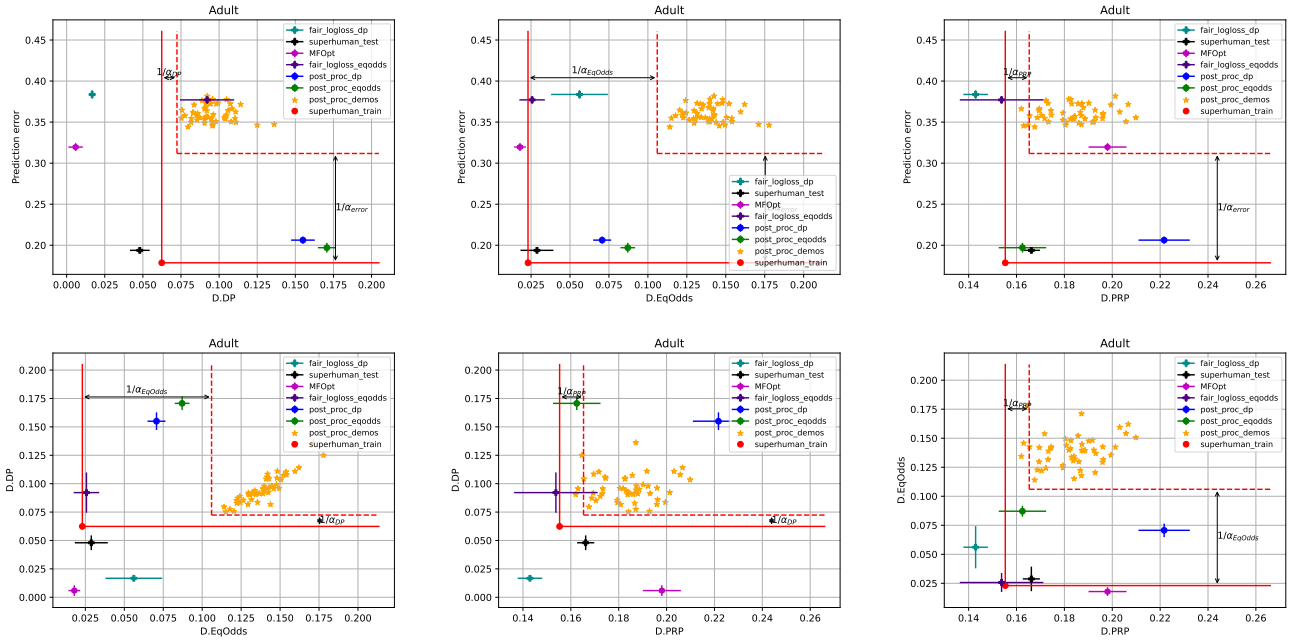

Figure 10. Prediction error versus *difference of*: *Demographic Parity* (`D.DP`), *Equalized Odds* (`D.EqOdds`) and *Predictive Rate Parity* (`D.PR`) on test data using noisy training data ($\epsilon = 0.2$) for `Adult` (top row) and `COMPAS` (bottom row) datasets.