Machine Learning Fairness

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Please access our code file via the links listed below:

LFR

CLR

CSVM

The performing metrics of each model is shown as follows:

Model	Accuracy	Calibration	Parity	Equality of Odds
LFR	0.517	African American: 0.491 Caucasian: 0.557	African American:0.388 Caucasian: 0.270	African American: Positive: 0.219 Negative: 0.273 Caucasian: Positive: 0.127 Negative: 0.433
CLR	0.838	African American: 0.834 Caucasian: 0.845	African American: 0.468 Caucasian: 0.579	African American: Positive: 0.772 Negative: 0.911 Caucasian: Positive: 0.996 Negative: 0.732
CSVM	0.711	African American: 0.704 Caucasian: 0.722	African American: 0.534 Caucasian: 0.375	African American: Positive: 0.8 Negative: 0.2 Caucasian: Positive: 0.475 Negative: 0.08

Among these three algorithms, Constraint Logistic Regression (CLR) has the best performance metrics. Hence we regard it as the one closest to the truth.