

Fair AI Tools Action Set

assessBias

[Documentation](#)



Fair AI Tools Action Set


Required Specifications

- An input table. Typically, this the data table that you use to test the model.
- A scoring function or model output variables
- Predicted target variable/variables (P_Bad1/P_Bad0)
- A sensitive variable to assess for bias. The model's performance and average predictions are calculated for each level of the sensitive variable and compared in order to produce bias metrics.
- A response variable to use for model assessment.
- A list of response levels. For models that predict a nominal response variable, you must specify the level of the response variable that corresponds to each predicted target variable.

Fair AI Tools Action Set

Bias Metrics

- Nominal Bias Statistics
 - DemographicParity – maximum pairwise difference in INTO_EVENT
 - PredictiveParity – maximum pairwise difference in the predicted variable corresponding to the event level
 - EqualAccuracy – maximum pairwise difference in ACC
 - EqualizedOdds – larger of the maximum pairwise differences in TPR and FPR
 - EqualOpportunity – maximum pairwise difference in TPR
- Interval Bias Statistics
 - PredictiveParity – maximum pairwise difference in the predicted variable



DEMO in SAS STUDIO and Model Studio

sas.com

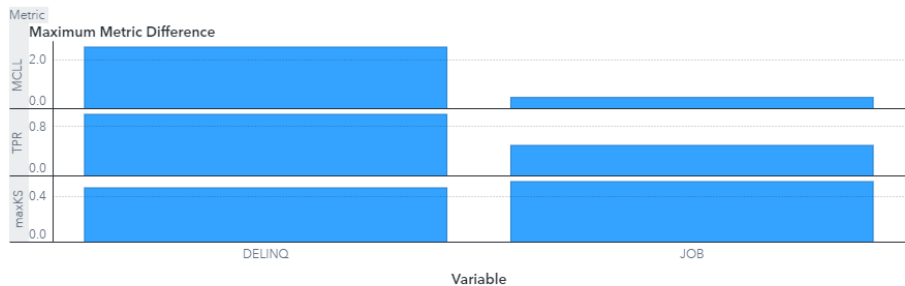


Results in Model Studio

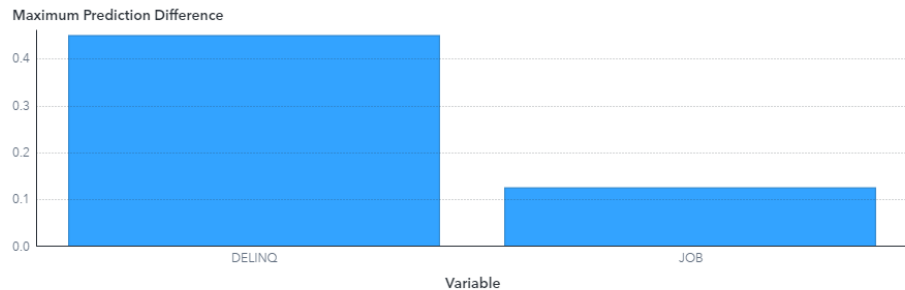
<input type="checkbox"/>	Variable Name	Label	Type	Role	Assess for Bias ↓
<input type="checkbox"/>	JOB		Character	Rejected	✓
<input type="checkbox"/>	DELINQ		Numeric	Rejected	✓

Node Assessment Fairness and Bias

Performance Bias Parity

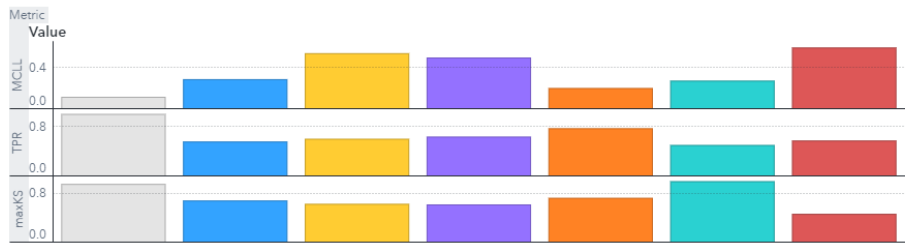


Prediction Bias Parity



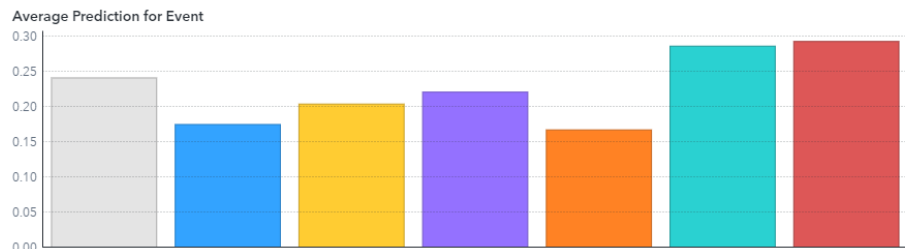
Performance Bias

JOB ↓



Prediction Bias

JOB ↓





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