Persona:Defendant (YUAN Moxi)

As a defendant, I really do not want to be wrongly judged. So i prefer models that have lower false positive rate. Thus if I only consider my appeal,I would like to choose model 5 and 7. As for model 5, the false positive rate is the lowest, which is only 1.9%. However, the false negative rate is too high, which is over 90%. So consider my teammates’ concern, this model is not that good. As for model 7,the false positive rate is also quite low, only 4.7%, and the accuracy is very high. However the same problem occurs that the false negative rate is too high. So these two models seems can not be accepted by our group. And For the group choice model 3, I noticed that it has advantages on accuracy and the disparity is also acceptable. As for my consideration, the false positive rate is not that high, and I can live with it. So i agree with the group choice.

Persona: Community Member (WANG Yian)

As a community member, I prefer models with low false negative rate to protect the neighborhood from potential recidivism. Thus, model 8, 2 and 6 stand out.

For those 3 models, model 8 will be my final choice for several reasons. First, the false negative rate of white Americans for model 6 reaches nearly 50%, which is a relatively undesired performance in terms of both fairness and safety. Second, while the accuracies of model 8 and 2 are similar, model 8 has a lower false negative rate and a higher false positive rate compared to model 2 as a trade-off. However, since the community member only wants to prevent recidivism, the high false positive rate is not really considered as a drawback.

I am fully aware that model 8 is not preferable from the fairness advocate’s and the judge’s perspectives, but model 3 with over 60% false negative rate is also unacceptable for the community. Consequently, I do not agree with the group choice.

Persona: Fairness Advocate (Josephine Lam)

From the perspective of fairness advocate, as i would want a model with lower disparity, model 2, 3, 4 and 5 are having relatively lower disparity.

For model 2, the disparity in accuracy is 0% which means there is no difference in the accuracy across two groups. Comparing to model 3, 4 and 5, model 2’s disparity in accuracy, FPR and FNR are relatively lower than other models such that it is desirable. My preference order will be model 2, model 4, then model 5 and model 3 at last.

However, by considering the impacts on other stakeholders, model 3 is still acceptable although the disparity in accuracy, FPR and FNR are not the best.

Persona: Judge(Jacob Gong)

As a judge, I’d like to draw your attention on model 1,3 and 7 with their relatively higher accuracy. Among these 3 models, model 3 is dominantly the highest.

Although model 3 has a seemingly high FNR at 65.2% overall, the number is still acceptable, compared to the highest one at 94%.

It is highly noticeable that besides having the highest accuracy, model 3 also offers low false positive rate and all disparities,which respectively is 10.1%, 4.9%, 7%, 9%.

In conclusion, my preferred AI model is model 3. Although to some extent we sacrifice the FNR, but we accomplish the best result within the constraints of reality, and most importantly, the highest accuracy.

Group decision : Model 3