



Dear Mayor Schaaf,

As you know, mass incarceration is a significant issue in the US with national spending at \$300 billion to put 2.2 million people behind bars. In addition to those direct costs, there are indirect societal costs calculated at \$1.2 trillion in welfare and support for families impacted by incarceration, lost job earnings and healthcare costs.<sup>1</sup>

Madam Mayor: we can decrease spending in these areas and even add to our economy by funneling resources into preventing recidivism instead of re-incarcerating ex-offenders.

In the city of Oakland, the solution we recommend is a job training program that will cost \$36,000 per ex-offender to provide re-entry and job training for two years.<sup>2</sup> We believe that job training is an effective system for re-integrating formerly incarcerated individuals to the workforce through providing counseling sessions, job interview instruction and identifying key industries with demand for low-skilled workers. Research states that individuals who participate in job training programs are less likely to recidivate.<sup>3</sup> Since our program has significant costs, we must pick the participating individuals with discretion.

As an employee at the Department of Prisons, I created an algorithm that more accurately identifies individuals who are likely to recidivate based on a number of factors.<sup>4</sup> If we find that the individual has a high likelihood to recidivate, the model recommends they enroll in the job training program. This serves as an intervention to keep individuals out of prison and train them for the workforce.

Broward County, FL recently caused controversy by using an algorithm that had high accuracy rates but created unfair outcomes for racial groups. Though algorithms are just machines crunching numbers and creating probabilities, they have many real-life implications on the future of people's lives.

In our algorithm, we acknowledge our data includes a disproportionate amount of African Americans. We are well aware that our model should not cause disparate impact in overpredicting African Americans at risk of recidivating. Instead, it examines each racial group individually and the likelihood of recidivism of prisoners within their racial group. The hopeful outcome of this process is that we are accounting for the bias in past data and creating a more proportionate outcome for prisoners of different racial groups.

When we discuss equity, we talk about equal outcomes as opposed to equal process. To correct past injustices, we change the threshold for how white ex-offenders

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<sup>1</sup> Hayes, Tara O'Neill, et al. "The Economic Costs of the U.S. Criminal Justice System." *AAF*, 16 July 2020, [www.americanactionforum.org/research/the-economic-costs-of-the-u-s-criminal-justice-system/](http://www.americanactionforum.org/research/the-economic-costs-of-the-u-s-criminal-justice-system/).

<sup>2</sup> These numbers based on a report here: <https://lao.ca.gov/Publications/Report/3781>

<sup>3</sup> Hayes, Tara O'Neill, et al. "The Economic Costs of the U.S. Criminal Justice System." *AAF*, 16 July 2020, [www.americanactionforum.org/research/the-economic-costs-of-the-u-s-criminal-justice-system/](http://www.americanactionforum.org/research/the-economic-costs-of-the-u-s-criminal-justice-system/).

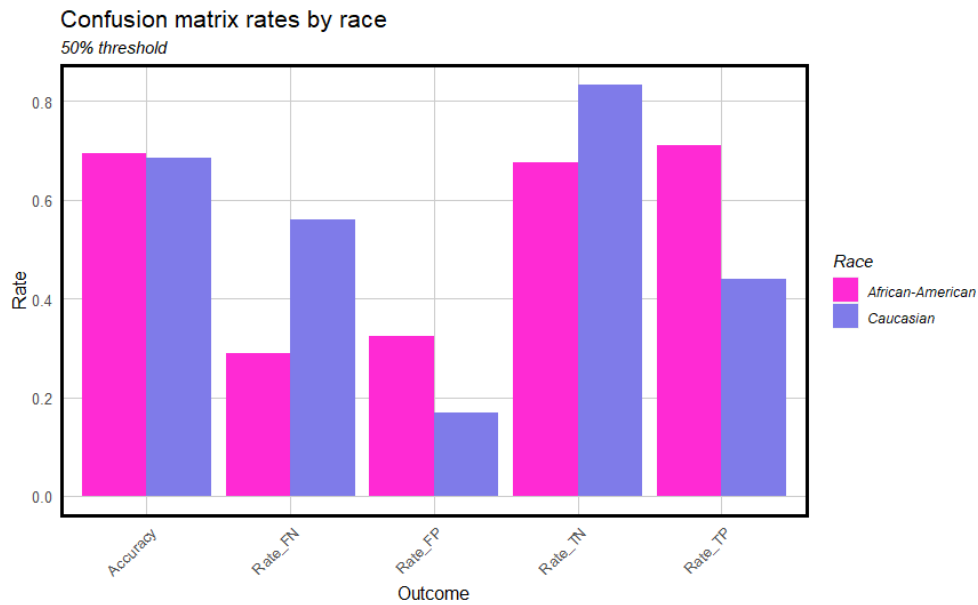
<sup>4</sup> The factors include: their sex, age, length of stay in prison, the number of prior crimes committed and the number of prior juvenile convictions they've had.



and Black ex-offenders are judged to recidivate. When we increase the threshold for Black individuals, there are fewer Black Americans who are predicted to recidivate and do not. By adjusting these numbers, we see more equal outcomes among white and Black ex-offender's rates of recidivism.

The bar plots below exemplify the above discussion through showing the outcomes for white and Black individuals at a lower threshold (50%- Figure 1) and higher threshold (60% for Black, 50% for white- Figure 2). Figure 2 has more equal outcomes for African Americans and Caucasians who were predicted to recidivate and did not (Rate\_FP category) and more equal outcomes for those who were not predicted to recidivate and did (Rate\_FN category) compared to Figure 1.

**Figure 1:**



**Figure 2:**

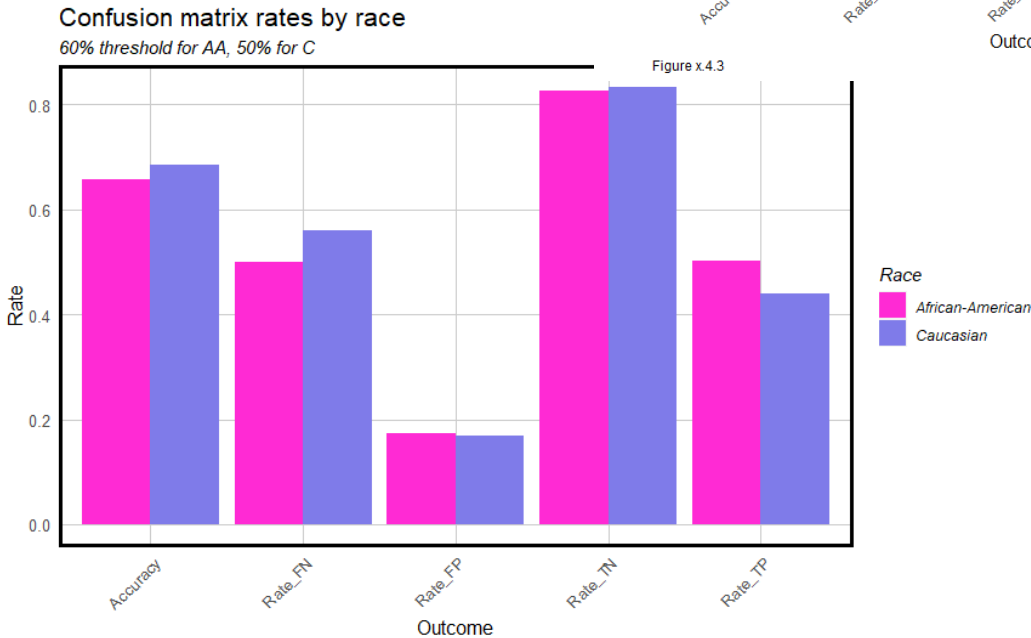


Figure x.4.3



In the business as usual approach, through either a judge or a model based on accuracy, we would mistakenly assign people to the job program who would not benefit from an intervention or resources and assign them at higher rates for Black individuals than white. This is a waste of resources. The cost of the program using this model at 50% threshold is calculated at around twenty million dollars.<sup>5</sup> If we use the algorithm with a higher threshold for African Americans, the cost of the program is about fifteen million dollars.<sup>6</sup> This is a difference of 5 million dollars!

Of course, all decisions have costs. While the benefits to using the algorithm are the better distribution and higher impact of resources, the costs are the danger to society of ex-offenders who will re-offend. Though hard to quantify, we can assume one cost might be on the victims of the ex-offender's next crime. However, I still believe that this cost is far lower than the staggering costs associated with incarcerated individuals and their families whom our model and program helps.

Mayor Schaaf, I urge you to accept this new algorithm for adoption in courts and in the city system. This algorithm acknowledges the legacy of racism and its present impact on policing and the incarceration system by creating equitable outcomes. Our job training program will help individuals re-enter the job market, increase economic activity in our city, and end the cycle of poverty and prison time for future generations.

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<sup>5</sup> These numbers are calculated with the 565 people the model predicts will recidivate and then multiplied by \$36,000.

<sup>6</sup> 426 people predicted to recidivate at this threshold multiplied by \$36,000.