

# HW 5

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This homework is meant to give you practice in creating and defending a position with both statistical and philosophical evidence. We have now extensively talked about the COMPAS <sup>1</sup> data set, the flaws in applying it but also its potential upside if its shortcomings can be overlooked. We have also spent time in class verbally assessing positions both for and against applying this data set in real life. In no more than two pages <sup>2</sup> take the persona of a statistical consultant advising a judge as to whether they should include the results of the COMPAS algorithm in their decision making process for granting parole. First clearly articulate your position (whether the algorithm should be used or not) and then defend said position using both statistical and philosophical evidence. Your paper will be grade both on the merits of its persuasive appeal but also the applicability of the statistical and philosophical evidence cited.

The COMPAS system is a data model used in judicial decisions to grant parole to already convicted felons. The model is trained on a host of variables to predict the percent chance someone up for parole is likely to partake in recidivism, or re-offending. The model, although having a, hopefully, noble purpose, has come under fire for statistical inaccuracies and ethical concerns. Despite concerns, its judicial application held up against scrutiny in the Wisconsin Supreme Court. However, I would advise against the further use of the system going forward due to efficacy, statistical discrepancies across protected groups, transparency, and philosophical apprehension.

A large concern for the continued use of the COMPAS system is the disparate impact across racial groups, where black individuals receive a false positive classification of recidivism compared to their white counterparts. This is glaringly evident of algorithmic bias and undermines the reliability and fairness of the COMPAS system. Individuals should not be pre-disposed to harsher punishments due to immutable characteristics. This is why there are protected classes, like race, to prevent algorithmic biases against immutable features of individuals. In the aforementioned defense within the Wisconsin Supreme Court, COMPAS testified that it did not use race or any protected class when designing the model. Then how is there a difference in impact across racial boundaries? COMPAS used the zipcodes of the individuals as a proxy for race as they are highly correlated. If there are ethical guardrails in place to prevent algorithmic biases against immutable features, how is using a proxy for said feature any more ethically or legally conscientiously defensible? Additionally, their testimony was one of the only glimpses under the hood of COMPAS that the public received as it is a black-box model. There is an argument to be in favor of the black-box nature of the system, as it wouldn't allow individuals to game parole by trying to artificially increase their chances against a recidivist classification. However, with the black-box system we cannot even begin to try to understand why people are more likely to re-offend and individuals should have the right to transparency within systems that pass down judgements that affect their quality of life. Also, due to the black-box nature, including creation, an accountability problem is created: Who is to blame for misclassifications? Despite all of these reckless abandonments of caution and care for the human condition, COMPAS proceeds further to try to make a sophisticated model that will predict recidivism with high accuracy. Their model, in fact, classifies accurately 65% of the time. To be fair, the COMPAS classification is supposed to be a tool used by the judge to grant parole, but its accuracy rate is marginally better than a coin flip. There is no reason a system riddled with algorithmic bias and accountability issues should be used when passing down sentences that affect real, human individuals.

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<sup>1</sup><https://www.propublica.org/datastore/dataset/compas-recidivism-risk-score-data-and-analysis>

<sup>2</sup>knit to a pdf to ensure page count

From a utilitarian perspective, I would conject that the internal flaws and influence of judicial officials may lead to a greater societal harm than good, especially when one considers the impact of false incarcerations on individuals, families, and communities. From a virtue ethics position, COMPAS has no leg to stand on as it works in opposition to fairness and integrity within the judicial system. Fairness is undermined by racial biases and integrity is undermined by the resolving to the computation of an algorithm when passing sentences to human individuals. From a deontological perspective, it is the court's duty to treat individuals with fairness and respect and the inclusion of this system in legal processes violates this duty. In summary, the compas system contains disparate impact across racial boundaries, uses proxies for protected variables, and lacks transparency and accountability to be marginally better than a coin flip. In no way should this, in its current state, be used in any judicial setting.