

Risk Assessment Tools for Criminal Justice

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Within the criminal justice system, difficult decisions need to be made on limited information. Judges decide who among those awaiting trial should be let out on bail, how long sentences should be, and who is eligible for parole. However, judges are only human, and are subject to phenomenon such as implicit racial bias, which can lead them to treat people of color more harshly. Automated risk assessment tools aim to counteract this by using data on defendants to rate how risky they are to public safety and provide a numerical score that judges can use to inform decisions. These systems take into account factors such as age, number of previous arrests, and personality to determine who represents high risk to the public and who represents low risk. The development tools is largely unregulated by state or federal authorities, and except for a ban on directly using protected classes such as race or gender to compute outcomes, there is very little guidance as to what is acceptable [1].

Algorithmic systems standardize and replicate particular views on justice. Before the introduction of algorithms, the criminal justice system was known to disproportionately impact people of color. As algorithms were built, the opportunity came to change the way the system works to balance public safety and fairness, ensuring that money spent is cost effective while increasing equality in decision-making. Instead of each judge being driven by their own views [2] on how the system should work, all judges would receive the same recommendations about whether to be lenient or strict, and would need to be able to justify with evidence any deviations from the recommendation.

Goals and Bias

There is a mathematical tradeoff between increasing how predictive a risk assessment algorithm is of future crime and reducing the amount of bias it shows. Different reasonable people have different perspectives on what the goal of these algorithms should be: to catch more criminals or to ensure that the justice system is fair to people of all races. In order to build a risk assessment tool, a conscientious decision needs to be made about which side of the trade off to prioritize [3]. Because there are many stakeholders – companies, defendants, judges, lawyers, and advocates – progress towards a more open, transparent design system has been slow.

Even though they're designed to reduce the amount of bias in the criminal justice system, an independent investigation has found that one of the most popular systems, COMPAS, is racially biased to disparately impact black defendants. This results in black defendants getting comparatively harsh decisions compared to white defendants with no basis in evidence. Even [4] an algorithm that predicts well can be racially biased, which means that bias can be hidden inside what seems to be a functional system. This means that these algorithms need to be 5 closely monitored and assessed for bias on a regular basis. However, because many of these tools are

developed behind closed doors, there is no public standard to hold them accountable to. Researchers can know that a tool is biased in a particular way, but not what choices led to that outcome. When there is no standard and little transparency, holding companies liable for the systems that they create becomes a difficult endeavor.

However, the state of Pennsylvania is taking an alternative approach in the development of a new Sentence Risk Assessment Instrument. Since 2010, they have been conducting publicly released research into the risks and rewards of risk assessment tools, and are in the process of a public comment period [6].

Data Use

Risk assessment tools are largely used at the county level. These tools aggregate criminal records, interviews, demographic data, and other features into a single database that can be fed into the algorithm. Because very few counties share this data, it has been difficult to examine the true impact of these systems. Defendants may not know the data that resulted in their own score, and trade secrets protect the proprietary status of the system. Even judges are not able [7] to access the methods by which algorithms are produced or meaningful information about how decisions are made. The recommendation an algorithm makes is only as good as the data it's [8] based on. Criminal records can be lost or inaccessible from state to state, and the survey intake method relies on police officers making judgments about how to code and enter data from interviews [9].

Conclusion

Risk Assessment Tools offer the promise of fair, objective judging. However, the reality has fallen short of that goal. With unclear accountability structures, racial bias, and problems with messy data, these systems have a long way to go before they are able to follow through on this promise. However, states like Pennsylvania are experimenting with ways to make the process more open and equitable. In the future, we can see how the development of new, more transparent tools compete with the opaque incumbents that are currently used in courts.

References

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