Use of Machine Learning in Justice System and Policing

The main use of machine learning in the justice system and policing is crime prediction. Some supporters believe that the application of machine learning can “act as a force multiplier” to help police officers and judges make better predictions to reduce crimes. While others argue that there exist biases and the system should not play a great role in the judgment.

According to the MIT course, there are biases at all stages of the AI life cycle: data, model, training and deployment, evaluation, and interpretation. For the justice system and policing model, the main factor that can impact its fairness is the input data bias. In some models, blacks are more likely to be predicted to re-offend. That is because prediction models are data-driven and in the training data set more blacks are recorded compared to other colors. Models simply label and categorize all cases to find the regulation and form its classification method. Therefore, when more guilty black cases are fed to the model during the training period, it will automatically combine the color with the possibility of crime. The so-called bias is formed.

However, does this bias mean that people should not use machine learning in the justice system and policing? It is hard to say. The machine does not make a mistake. It learns past cases, finds the regulation, and performs like past judges. Scientists also work correctly. They get raw data and design proper algorithms to process data. Opponents only point out that the model has a higher error rate for blacks. They do not mention the quantity. If there exists a significant quantity difference, will people make the same mistake or even have a higher error rate?

In general, the use of machine learning in the justice system and policing should not be considered a bad idea. In some ways, it acts as an average-skilled judge. People can make changes once they realize their mistakes. However, the machine has to learn from countless experiences and improve its performance step-by-step. When people notice the bias on the machine, they probably also realize the mistake they have made. Now scientists have to reduce the effect of this kind of bias with the help of algorithmic solutions, such as adversarial learning and learned latent structure. But shortly, with more and more people committed to building a better society, the machine learning model can be a reliable helper in the justice system and policing.