Cyber Challenges to International Human Rights

Title: The use of data analytics in the judiciary

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Abstract:
In my paper, I will examine the effect of different kinds of data-driven risk-assessment tools, currently used by the judiciary, on the criminal justice system.

Statistical models and software programs designed to help judges and prosecutors assess the "risk" of criminal offenders have been used in the criminal justice system for more than 30 years .Traditionally, based on a number of variables about defendants, either connected to their criminal history or sociodemographic characteristics, such algorithms provide an estimate of an offender's risk. Despite the benefits, there is a lot of controversy around the use of these kind of tools, the factors that should be included and the ability to predict what the individual will do based on his/her group affiliation.
Recently, Kleinberg et al. examined algorithm based machine learning techniques that do not rely on common historical criminological theory. Rather, their algorithm conceived as uninterpretable black box and the only factors that used to train it are age, current charge and past criminal record. They found that if we use these algorithms instead of relying on judge intuition, we could significantly reduce the crime rate, jail less people and reduce racial disparities.
In my paper I will try to understand if the shift from algorithms based on psycho-social assessment tools to algorithms based on machine learning techniques, alters our understanding of the equities, fairness and the core values of criminal justice.