Part1.

I choose ***Beyond Bias: Re-Imagining the Terms of ‘Ethical AI’ in Criminal Law*** because I'm particularly interested in the law, especially the criminal law. I often listen to the clips of public criminal law lectures on the Internet, which is very interesting. Specifically, it is Luo Xiang's criminal law course on YouTube. At the same time, I am particularly interested in the concept of Ethical AI. In addition, as reading material introduced it it a more philosophical paper, which is also my area of interest. After reading the title I become being curious about how artificial intelligence can produce discrimination in criminal law.

Part2.

How to interpret crime data? The data reflects the distribution of law enforcement resources and priorities, not the proportion of criminal activities in the overall demographic sense. Through the study of PTRA, this article clarifies that the current mainstream practice of data collection, marking, and analysis originates from a criminal law ideology that defends unreasonable judgments, and ultimately leads to the reproduction of this ideology.

Part3.

Reasons for algorithmic discrimination

(1) The complexity of the algorithm

According to the complexity of the algorithm, it can be divided into three categories, namely, white box, gray box, and black box. White box means that the algorithm is completely deterministic, gray box means that although the algorithm is not certain, it is easy to predict and explain, and black box means that the algorithm is difficult to predict and explain. If it is a black box, the algorithm is difficult to predict, and ordinary consumers do not know whether the algorithm itself is discriminatory. Although the algorithms of some companies are not discriminatory in name, they actually generate discrimination in the specific process. The complexity of the algorithm itself has made it difficult to analyze and solve it, not to mention that the company itself also protects the algorithm as an intellectual property, which also increases the difficulty of algorithm disclosure.

(2) Bias in the data itself

Algorithms cannot be completely objective from the beginning of research and development. Whether it is subjective modification of the algorithm for profit, or the defects of data input or algorithm technology, algorithm discrimination may become a long-term problem. The discriminatory data after calculation is also unfair, and sometimes too few reference data samples make the algorithm system unfair. Most of the prejudices embodied by artificial intelligence come from the concept of absorbing human culture itself when learning human language, which has generated prejudice to some extent.

(3) The designer's bias

The design requirements and design goals of intelligent algorithms are reflected by the subjective value of developers and designers. Developers and designers may bring their own biases into the algorithm, and the algorithm will continue this bias. The essence of intelligent algorithms is to use past experience to predict future results. Discrimination and prejudice in past experience may be solidified in intelligent algorithms and strengthened and expanded in the future.

In which scenarios (if any) it should replace or be a companion to flawed but not entirely heterogeneous human decision making.

(1) Building a technical fair standard system

The legal rules, systems, and judicial decision-making behaviors in human society are bound by procedural justice and due process. Now these rules are being written into the program, but the technicians do not know how to be fair, and there is no certain standard to guide them. In the face of decision-making procedures that concern the interests of each individual, artificial intelligence determines the interests of everyone, and people need to construct rules of technical fairness in advance. Reduce the opacity of the algorithm by constructing technical fairness rules.

(2) Increase the transparency of the algorithm

The opacity of the algorithm is a cause of algorithm discrimination. It may be difficult for us to review the algorithm after the fact, or it may be costly. But we can request algorithm users or designers to report some algorithm data.

(3) Improve AI-related systems

In order to avoid algorithm discrimination, we can accountability and discipline the designers or users of algorithm systems. The administrative agency may conduct exhortation, punishment or education in accordance with relevant laws.

Part4.

Yes.

- Lunchtime seminar series with expert invited speakers