

AI in Criminal Justice: Case Studies

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SOURCE: CASE STUDY 1: LOOMIS VS WISCONSIN and CASE STUDY 2 : ROBERT McDANIEL

Firstly, answering what are some of the **challenges that AI will pose in the judicial system** based on these two cases, the following are my forecasted challenges:

1. **Bias and Discrimination:** AI algorithms can perpetuate and amplify existing biases in society, leading to unfair and discriminatory outcomes in the judicial system. These algorithms often rely on historical crime data, which may perpetuate biases and disproportionately flag individuals from marginalized communities. For instance, the COMPAS algorithm was found to be more likely to classify black defendants as high-risk than white defendants, and the policing algorithm pointed out Robert to be guilty without any wrongdoing.
2. **Inequalities:** AI decision-making, if not carefully designed and implemented, can intensify existing inequalities. For instance, the second case study shows how an AI system can disproportionately target minority groups and individuals from low-income neighbourhoods.
3. **Transparency and Accountability:** The algorithms used in AI-based decision-making systems are often proprietary and not publicly available for scrutiny. The lack of transparency can hinder accountability and make it challenging to hold AI systems responsible for erroneous or discriminatory outcomes, and this can erode public trust in the judicial system.
4. **AI-Centred Approach:** Defendants may sometimes not have a meaningful opportunity to challenge the results of AI-based risk assessments or other decisions, and human judges may be overly influenced by these automated recommendations. Hence, it is crucial to maintain human oversight and intervention. AI should not replace human judgment but rather complement it, ensuring that decisions are made in a way that aligns with ethical principles and legal standards.
5. **Explainability and Interpretability:** AI algorithms can be complex and difficult to understand, even for experts. This lack of explainability makes it challenging to understand how these algorithms reach their decisions.

Secondly, talking about the **impact of algorithms on fundamental liberties**, the following are the impacted areas:

1. **Privacy:** Since these algorithms collect and analyze vast amounts of personal data, including sensitive information such as financial records, medical history, and online activity, they raise concerns about the potential for unauthorized surveillance, data breaches, and misuse of personal information.
2. **Freedom of Expression:** Because of monitored and censored online content, these AI systems can potentially restrict freedom of expression and limit access to information. Algorithmic filtering reinforces existing biases and limits exposure to diverse viewpoints.
3. **Human Autonomy and Control:** Over-reliance on AI can diminish human autonomy and control over individual lives. Individuals may feel they are being treated as data points rather than valued members of society, with their lives subject to algorithmic decisions.
4. **Erosion of Fundamental Rights:** AI-powered predictive policing algorithms, which aim to identify individuals at high risk of committing crimes, raise concerns about violating the fundamental principles of criminal justice and procedural fairness. Individuals flagged may not be informed about the basis for their identification, limiting their ability to challenge the

decision. For instance, Robert was being treated as guilty without being proven, and even though he was never arrested or charged with a crime, his reputation was tarnished.

Thirdly, to make ‘**algorithm designers and developers (people) more accountable**’, these steps can be taken:

1. **Establish Clear Ethical Guidelines and Legal Frameworks:** Develop comprehensive ethical guidelines and legal frameworks that explicitly address the responsible development, deployment, and use of AI in the judicial system.
2. **Implement Robust Oversight Mechanisms:** Establish robust oversight mechanisms to monitor the performance of AI systems in the judicial system. These mechanisms should involve independent bodies or committees with expertise in AI, law, and ethics.
3. **Foster Open Dialogue and Collaboration:** Encourage open dialogue and collaboration among stakeholders, including AI experts, legal professionals, civil society organizations, and marginalized communities, to help identify potential issues, address concerns, and build trust in AI-powered judicial systems.
4. **Educate and Train AI Professionals:** Provide comprehensive education and training for AI professionals on ethical considerations, bias mitigation techniques, and responsible AI development practices.
5. **Continuous Evaluation and Improvement:** Implement ongoing evaluation and improvement processes for AI systems in the judicial system. This includes regular audits, impact assessments, and feedback loops to identify and address potential issues. Encourage developers to conduct comprehensive impact assessments that evaluate the potential social, ethical, and legal consequences of their algorithms.

To conclude with the **ethical concerns from the literature**, the table below demonstrates the same:

S.No.	Ethical Concern	Description
1.	Fairness/Validity of Algorithms	As covered in the first challenge posed by algorithmic decision-making systems, these algorithms openly discriminates against vulnerable and much-neglected societal groups. Moreover, the quality and representativeness of the data used to train AI algorithms are crucial for ensuring fairness and validity.
2.	Presumptions of Innocence	Individuals may be subjected to negative consequences, such as pretrial detention or harsher sentencing, based on algorithmic predictions of their risk, even before they have been found guilty of any crime. This can erode trust in law enforcement.
3.	Right to a Fair Trial	These systems can infringe upon the right to a fair trial by introducing biases into the judicial process. Individuals flagged by AI algorithms may not be adequately informed about the basis for their identification or the decision-making process behind the algorithm's output, and the complexity of the algorithm can further worsen the case.
4.	Principles of Legality	The use of AI in the judicial system must be grounded in clear frameworks and statutes that establish its legitimacy, scope, and limitations. The development, deployment, and use of AI should be subjected to democratic oversight and public scrutiny.

5.	Principles of Non-Discrimination/Equality	AI systems must be designed and implemented in a manner that deals with existing inequalities, taking careful consideration of the potential for bias at all stages of the AI lifecycle. Regular impact assessments should be conducted to mitigate any potential discriminatory effects through data-driven analyses, stakeholder engagement, and corrective measures.
6.	Opacity of AI/Explainability/Transparency	The black box algorithms can lead to concerns about opacity and a lack of transparency. This can make it challenging to identify and address potential biases. The development of explainable AI techniques and transparency tools is crucial for fostering trust and accountability.