

# Chapter 4

## Criminal Justice System in the Age of Artificial Intelligence: Exploring Rights, Risks, and Responsibilities in the Digital Era

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### ABSTRACT

*AI biases can induce existing imbalances and affect the most affected populations more severely. The study underlines the need to introduce the imperative of transparency and explainability of AI systems. The fact that many algorithmic systems are correspondence opaque raises questions about how such decisions are made and who is accountable when using artificial intelligence, which leads to wrongful arrest or unfair sentencing. The research calls for effective legislative frameworks that would protect constitutional entitlement due to the widespread use of AI systems. The criminal justice system can effectively embrace AI and avoid the risk of infringing individual rights to make technology serve justice rather than inimical or detrimental to justice and basic human rights.*

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## INTRODUCTION

The use of artificial intelligence or better still the integration of AI in the criminal justice systems has proven to be revolutionary in the process of law enforcement and the judicial systems (Završnik, 2020). New technologies in AI increase the effectiveness in solving crime and prosecution but residue for rights, responsibility, fairness, and biases (Ibegbulam, et al 2023). When analyzing the place of AI in the criminal justice system, it is imperative to describe the general concept and its use in criminal justice, the possibilities, and the threats AI has (Marwala, & Mpedi, 2024). The Fourth Industrial Revolution harnesses digital combined with physical and biological systems brought by the use of AI, machine learning, big data, automation, and robotics (Datta, P. 2023). AI holds promise in the criminal justice system because it can help law enforcement agencies not only solve and prevent increasing crimes that have not hitherto been seen (Sachoulidou, 2024). Integrating the concept of AI in the criminal justice system has its advantages but comes with a concern for openness, equity, and rights of a person. One good illustration is predictive policing, where the outcome is a set of predictions on future crime events (Meijer & Wessels 2019). Technological systems use data on crime rates, social media, and population characteristics to locate the areas that are at risk but the application is criticized for violation of individual privacy and stereotyping (Lee, Y., Bradford & Posch 2024). This is because those specific regions or demographics are likely to be over-policed in the first place, and so it will continue to happen when AI has been trained in existing data. Also, predictive policing is intrusive because it utilizes public data for anticipating criminality.

Biometric technology namely facial recognition gives the police character to identify and further apprehend suspects. It was able to scan thousands of faces in real-time improving security, monitoring, and legal evidence acquisition (Li et al. (2020). Even though, this provides an effective way of arresting suspects and deterring crimes, it has very serious implications on privacy and civil rights. Specifically, facial recognition systems have been accused of enhancing racial and gender discrimination which is dangerous and a threat to human rights (Gentzel, (2021). Research has demonstrated time and again that facial recognition systems have higher error rates while identifying people of color, especially black people, and women causing them to be misidentified and arrested (Wang, et. al 2024). This chapter argues that facial recognition errors pose equity and justice issues because minorities are more likely to be misidentified. Moreover, AI surveillance may affect privacy; therefore, citizens will change their behavior because of the surveillance by the government (Smith & Miller 2022).

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