International Journal of Engineering Research and Development

e- ISSN: 2278-067X, p-ISSN: 2278-800X, www.ijerd.com Volume 21, Issue 11 (November 2025), PP 223-224

Impact of Artificial Intelligence on Criminal Justice System: A Contemporary Legal Analysis

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Abstract

The rapid growth of Artificial Intelligence (AI) has significantly influenced the criminal justice system worldwide. From predictive policing to automated decision-making in bail, sentencing, and surveillance, AI tools promise efficiency but also raise serious legal, ethical, and constitutional concerns. This research paper analyses the modern impact of AI on the criminal justice system with a special focus on the Indian legal framework. It highlights issues such as algorithmic bias, data privacy, misuse of surveillance technologies, and the need for robust regulation. The study concludes with recommendations for responsible AI governance in criminal justice.

Keywords

Artificial Intelligence, Criminal Justice System, Predictive Policing, Surveillance Law, Algorithmic Bias, Data Privacy, Indian Constitution, Legal Regulation

Date of Submission: 12-11-2025

Date of acceptance: 24-11-2025

I. Introduction

Technological advancement has transformed the global legal landscape, and AI is at the center of this transformation. Courts, police departments, and investigative agencies are increasingly using AI tools to enhance decision-making. While AI-driven systems offer accuracy and speed, their unchecked use may threaten due process, fairness, and fundamental rights under Articles 14, 19, and 21 of the Indian Constitution.

This paper examines the latest developments in the use of AI within policing, surveillance, forensic analysis, and judicial decision-making, and evaluates the legal challenges emerging from these technologies.

II. Literature Review

Several scholars highlight the benefits of AI in law enforcement, such as:

- Faster data processing
- Predictive analytics for crime hotspots
- Improved forensic accuracy

However, recent studies also reveal major concerns:

- Algorithmic bias leading to unfair profiling
- Lack of transparency in AI decision-making
- Privacy violation due to mass data collection
- Absence of specific legislation governing AI tools in India

Global research from the US, UK, and EU stresses the need for regulatory frameworks like the EU AI Act. In India, NITI Aayog's proposals exist, but legal enforcement remains limited.

III. Methodology

This research uses a doctrinal method:

- Review of statutes, case law, constitutional provisions
- Analysis of scholarly articles on AI and law
- Comparative study of global regulations
- Examination of Indian government reports (NITI Aayog, MeitY)

The objective is to understand how AI intersects with legal rights and public safety.

IV. AI in Criminal Justice: Latest Developments

4.1 Predictive Policing

AI tools analyze previous crime data to predict high-risk areas.

Issues:

- Potential targeting of specific communities
- Bias inherited from flawed datasets

4.2 AI-Based Surveillance

Technologies like facial recognition, drones, and CCTV analytics are widely used:

- Delhi Police has adopted Automated Facial Recognition Systems (AFRS)
- Raises concerns of mass surveillance and violation of privacy (Puttaswamy Judgment)

4.3 AI in Judicial Decision-Making

AI tools help judges with:

- Case-law search
- Draft preparation
- Sentencing recommendations (experimental)

Concerns:

- Lack of accountability if decisions rely on AI
- Risk of non-transparent algorithmic influence

V. Legal and Constitutional Challenges

5.1 Right to Privacy

AI surveillance may violate the right to privacy under Article 21.

5.2 Violation of Article 14 (Equality)

Biased algorithms may lead to discriminatory policing.

5.3 Lack of Regulatory Laws

India currently has no specific law governing AI in criminal justice.

5.4 Due Process Concerns

AI-based decisions may bypass judicial reasoning, affecting fair trial rights.

VI. Results & Discussion

The research shows:

- AI enhances policing efficiency but increases the risk of misuse.
- Lack of transparency makes AI decisions difficult to challenge.
- India needs clear legal standards for AI admissibility, accountability, and data protection.
- Public trust in criminal justice may decline if AI remains unregulated.

VII. Conclusion

AI has the potential to revolutionize the criminal justice system but also poses serious threats to constitutional rights. India must adopt a regulatory framework ensuring transparency, non-discrimination, data protection, and human oversight. The future of criminal justice must balance technological efficiency with legal safeguards.

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