



# Artificial Intelligence And The Criminal Justice System: - Navigating Ethical And Legal Implications

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## **Abstract: -**

Artificial intelligence (AI) is transforming the criminal justice system, causing significant changes in law enforcement, judicial processes, and correctional practices. This study digs into AI's multiple applications, looking at how it might improve system efficiency, accuracy, and justice. Key AI technologies, including predictive law enforcement, risk evaluation tools, and machine learning systems, are used to evaluate huge data sets, identify crime patterns, and expect criminal conduct.

Predictive policing algorithms use historical crime data to predict future criminal activity, helping law enforcement allocate resources better. Risk assessment tools, used throughout the pre-trial and sentence phases, analyze the possibility of reoffending to make better informed and consistent decisions.

**Keywords:** Artificial Intelligence, Criminal Justice System, Data Security, Human Intelligence.

## **History of the criminal justice system in India: -**

The history of India's criminal justice system may be traced back to Ancient Hindu Criminal Law, Mohammedan Criminal Law, and English Criminal Law. In ancient India, the Vedic notions of "Dharma" dominated the concept of criminality rather than distinguishing it from civil offenses. Under this system, the King was responsible for administering justice and punishing offenders. Furthermore, when Islamic law was introduced in India based on the Quran, it divided crimes into two categories: crimes against God, which were viewed as socially punished public transgressions, and crimes against individuals, which were considered as personal wrongs that the

individual had to right.<sup>1</sup> The repercussions of transgressions were decided using concepts such as "Qisas" (retaliation), "Diyut" (blood money), "Hadd" (set penalty), and "Tazir" (discretionary punishment). The Charter of 1833, which constituted a watershed moment in Indian history, enabled the foundation of the All-India Legislature and the Law Commission. The first Law Commission, led by Lord Macaulay, prepared India's Penal Code in 1834. It was voted on October 6, 1860, and authorized by the Governor-General. On January 1, 1862, the Indian Penal Code was formally enacted. The contemporary criminal justice system is governed by both procedural and substantive law. Procedural law discusses how substantive legal requirements are implemented, whereas substantive law specifies criminal offenses and determines their consequences.<sup>2</sup>

### **Development of Artificial intelligence in various arenas: -**

Artificial intelligence is changing many industries, including healthcare, banking, transportation, and law enforcement. As artificial intelligence systems become more advanced and autonomous, questions regarding their accountability and criminal liability arise. In India, the subject of criminal liability for artificial intelligence is a complex and expanding legal field. This comprehensive research tries to investigate the legal implications and challenges associated with assigning criminal responsibility to artificial intelligence in the Indian context. Artificial intelligence is the replication of human intelligence in machines that can reason and learn like humans. It comprises creating computer systems capable of doing tasks that would typically need human intelligence, such as visual perception, speech recognition, decision-making, problem-solving, and language transformation. Advances in data collecting, aggregation, algorithms, and processing power have transformed computers into self-learning machines that can adapt to new inputs without requiring programming (Norvig 2002). Every sector can profit from new advancements that improve their processes. Brynjolfsson and McAfee (2017) describe the actual benefits of these breakthroughs in industries like as commerce, medicine, sports, and large-scale systems. Prognostication, diagnostics, treatment optimization, and sickness prediction are all possible applications (CAR 2019).

There are several chances to use Artificial intelligence platforms to improve justice systems.

Humans have long sought ways to do numerous jobs efficiently. Various technologies, including artificial intelligence, are being developed to address these issues. Although artificial intelligence was first proposed in the 1950s, it still requires substantial research and development, especially in industrialized countries. The concept of developing autonomous robots has been in human culture and literature since the dawn of civilization.<sup>3</sup> Artificial intelligence is seen as a vital component in the Fourth Industrial Revolution. Technology has improved significantly in recent decades, with examples including drones, voice assistants, and self-driving cars. Artificial

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<sup>1</sup> Sakhalkar,, Ujjwala & Magar, Shreeniwas, *et.al.*, "Emergence of Artificial Intelligence in Indian Justice System" *Shodhsamhita* 483-488 (2023).

<sup>2</sup> *ibid*

<sup>3</sup> AvArtificial Intelligencelable at : <http://hdl.handle.net/10603/386697>

intelligence has taken major importance in modern times, as its application has become indispensable in most technical applications. Artificial intelligence has impacted several sectors, including healthcare and transportation. Automating tasks and minimizing human intervention has become a global trend to improve efficiency and reduce errors. <sup>4</sup>Every great technology discovery has the potential to either benefit or damage society. The technology measurement and analysis capacities of Artificial Intelligence can very well help in resolving some of the most serious transport, humanitarian assistance, and public health problems, including supporting significant changes in clinical diagnosis and treatment, integrating transport and communal growth, and exacerbating the dangers of climate change.<sup>5</sup> The criminal justice system, including courts and court management, is overcrowded with lakhs of pending cases, necessitating the development of innovative solutions, particularly those based on artificial intelligence, to minimize court pendency and justice delays. The majority of these artificial intelligence-based technological solutions and companies are controlled by private enterprises, and providing justice delivery systems in the hands of private actors would be a massive topic that we need to explore first before its deployment.<sup>6</sup> Artificial Intelligence is viewed as a vital component of the Fourth Industrial Revolution. Drones, voice assistants, and self-driving cars are examples of how far technology has come in recent decades. Artificial Intelligence has grown in relevance in recent years, with its use now required in the majority of technical applications. Artificial Intelligence has altered our lives by infiltrating a variety of industries such as healthcare, transportation, and more. All countries have acquired a tendency to automate most of the tasks and minimize human interaction to ensure efficiency and eliminate errors.<sup>7</sup>

Prof Stephen Hawking once stated that "the development of full artificial intelligence could spell the end of the human race". He went on to predict that "it would take off on its own, and re-design itself at an ever-increasing rate" and therefore "humans, who are limited by slow biological evolution, couldn't compete, and would be superseded". Artificial intelligence has gone through numerous phases since its inception as an academic study in 1956, including hope, disappointment, and funding loss, followed by new methodologies, success, and renewed financing. Since the beginning of Artificial Intelligence Research, several methodologies have been tried and artificial Intelligence-led, including artificial Intelligence Mimicking, human problem-solving modeling, formal logic, massive information libraries, and animal behavior imitation. Mathematical statistical machine learning was the dominating strategy for tackling tough issues in industry and research during the first decade of the twenty-first century.<sup>8</sup> Artificial Intelligence is being explored as a public safety resource in a variety of ways. One particular Artificial Intelligence application, facial recognition, is widely used in both the public and private

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<sup>4</sup> ibid

<sup>5</sup>Niteesh Kumar Upadhyay & Romashkin, Snizhana., *et.al.*, "Using Artificial Intelligence to Address Criminal Justice Needs, Problems, and Perspectives", in Niteesh Kumar Upadhyay, Romashkin, Snizhana., *et.al.* (eds.), *Legal Analytics* 1-14 (1st edn., 2022).

<sup>6</sup> ibid

<sup>7</sup>ibid

<sup>8</sup>Dr. Sushma Singh and Km. Richa, "The Function of Artificial Intelligence in Improving Criminal Justice System with Reference to Indian", in Dr. Sushma Singh and Km. Richa (eds.), *Cyber Crime, Regulations and Security – Contemporary Issues and Challenges* 133-139 (The Law Brigade Publisher, 2022).

sectors. Intelligence analysts, for example, frequently rely on facial photographs to determine an individual's identity and whereabouts. Examining a large volume of potentially relevant photographs and videos in an accurate and timely manner is a time-consuming, laborious operation with the possibility of human mistakes due to weariness and other factors. Unlike people, machines do not tire. Through efforts such as the Intelligence Advanced Research Projects Activity's Janus computer-vision project, analysts are conducting experiments on the usage of algorithms that can learn to distinguish one person from another using facial cues in the same way.<sup>9</sup> The criminal justice system is a collection of legal and social organizations that implement criminal law by a predetermined set of rules and regulations. ("The Criminal Justice System | Introduction to Sociology," the same year). Criminal justice systems are made up of several large subsystems that include one or more public institutions and their employees: the police and other law enforcement agencies; trial and appeal courts; prosecutions and public defense offices; testing and parole units; childcare facilities (prisons, prisons, transit centers, boarding houses, etc.); and correctional departments (which are in charge of some or all probation, pardon, and child custody services).

("Criminal Justice System - Structural and Theoretical Components of Criminal Justice Systems, The Systems in Operation, The Importance of Viewing Criminal Justice as A System - Rank Articles," from the year 2000). Criminal justice systems can be broadly classed as common law, public, Islamic, or scientific in origin. Today, however, many authorities use hybrid models that incorporate a range of legal systems. ("Criminal Law," 2021). Many of these programs have the same fundamental set of settings. In addition, most criminal justice systems have implemented legal legislation. Almost all criminal justice systems are managed by the same individuals. A functional justice system is critical to the rule of law since it seeks to minimize crime and give victims compensation. In particular, the resources for the criminal justice system that supports the law should be equal, unbiased, and respect the human rights of those affected - those who have been traumatized and accused.<sup>10</sup>

### **Application of Artificial Intelligence in the criminal justice system: -**

Artificial intelligence has made considerable progress across multiple industries. Given the complexities of the criminal justice system, the United Kingdom and other countries have decided to use Artificial intelligence for accuracy and clarity, resulting in better legal outcomes.<sup>11</sup>

<sup>9</sup> AvArtificial Intelligencelable at: <https://nij.ojp.gov/topics/articles/using-artificial-intelligence-address-criminal-justice-needs>

<sup>10</sup> Wickramarathna, Nipuni & Edirisuriya, E.A.T.A., *et. al.*, "Artificial Intelligence in the Criminal Justice System: A Literature Review and a Survey" (2022).

<sup>11</sup> AvArtificial Intelligencelable at: <https://www.techuk.org/resource/all-you-need-to-know-about-Artificial-Intelligence-adoption-in-criminal-justice.html>



- **Conducting criminal mapping and factor analysis.**<sup>12</sup>
- The criminal justice system can employ criminalization algorithms to map crimes by rapidly processing large amounts of data from multiple sources and pre-designed data models. Artificial intelligence also considers international legislation, the current situation, crime hotspots and trends, as well as the most recent modifications, while dealing with criminal justice.
- **Face recognition**<sup>13</sup>

We are all aware that the face is the index of the mind. Reading the criminal's face is critical in determining whether the person is real. Human identification may be Artificial Intelligence, however, Artificial intelligence will run various parameters and data. It can also help identify suspects in surveillance films, confirm IDs during police checks, and locate missing people.

- **Predictive policing**<sup>14</sup>

This is another effective Artificial intelligence use in which policing employs previously collected data and advanced analytics to detect or anticipate crimes before they occur. Artificial intelligence can predict when, where, who, or in what situation a crime will occur by recognizing data from historical crime trends. Such studies and predictions can drastically cut crime rates.

- **Automate legal research**<sup>15</sup>

Criminal lawyers and judicial teams can use Artificial intelligence-powered technologies to expedite legal research. Artificial intelligence can help you swiftly search through large legal datasets. It can identify applicable statutes, case law, and legal precedents to assist lawyers in reaching more precise and accurate conclusions.

### Challenges

- **Data Privacy and Security:** The use of artificial intelligence in criminal justice demands the collection and analysis of enormous datasets, presenting privacy and security problems.
- **Bias and Fairness** Artificial intelligence systems may inherit biases from Artificial Intelligence data, potentially resulting in biased consequences. Ensuring justice and accountability in Artificial intelligence systems is grave.
- **Public Trust and Ethical Concerns** The use of Artificial intelligence in law enforcement may generate ethical concerns among the public, necessitating transparent policies and communication to establish trust.
- **Technical Limitations:** Artificial intelligence systems are not flawless, and the technical confines of Artificial Intelligence may cause errors or misinterpretations. This emphasises the Need for human intelligence.

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<sup>12</sup> ibid

<sup>13</sup> ibid

<sup>14</sup> ibid

<sup>15</sup> ibid

## Conclusion:

Artificial intelligence has become a necessity for our society these days. However, In India, it is recommended to introduce Artificial intelligence in parts. Beginning with fundamental legal and regulatory chores, the deployment can later expand to include more advanced machine learning and deep learning algorithms, particularly in technical investigation processes. As a result, Artificial intelligence can be integrated into decision-making processes using advanced technologies. This tiered strategy assures rigorous testing and the gradual creation of trust in these technologies. Trials involving Artificial intelligence technology must emphasize transparency in the administration of justice. This includes guaranteeing that people understand how decisions are made and verified using Artificial intelligence. To do this, explanatory processes should be designed to clarify the utilization of data and the decision-making rationale.

Artificial intelligence has not only reduced time, but it has also continually generated accurate and effective solutions. However, the incorporation of Artificial intelligence into criminal justice administration presents several challenges. While Artificial intelligence has the potential to ensure equitable justice for all individuals, this can only be accomplished through the construction of a strong legal framework and regulatory power. These fundamental components are necessary for Artificial intelligence to become an integral and influential aspect of India's Criminal Justice Administration.

