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# **USE OF ARTIFICIAL INTELLIGENCE IN INVESTIGATION AND TRIAL UNDER BHARATIYA NAGARIK SURAKSHA SANHITA (BNSS) 2023: BOON OR THREAT**

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## **Abstract**

Artificial Intelligence (AI) has emerged as a transformative force in the administration of criminal justice systems worldwide. In India, the introduction of the Bharatiya Nagarik Suraksha Sanhita, 2023 (BNSS) reflects a significant shift toward technological modernization of criminal procedure. The integration of Artificial Intelligence in investigation and trial processes promises enhanced efficiency, improved accuracy, and expedited justice delivery. However, the adoption of AI also raises serious concerns regarding privacy, fairness, transparency, and accountability. This research paper examines the role of Artificial Intelligence in investigation and trial under the BNSS, analyzing whether the technological integration acts as a boon or a threat to the criminal justice system. The paper further evaluates the legal implications, challenges, and potential safeguards necessary to ensure responsible use of AI within the criminal justice framework.

**Keywords:-** Bharatiya Nagarik Suraksha Sanhita (BNSS) , Investigation, Trial, criminal Justice system

## **Introduction**

Artificial Intelligence has rapidly transformed various sectors including healthcare, governance, finance, and law enforcement. In the criminal justice system, AI technologies are increasingly being utilized for crime prediction, digital surveillance, facial recognition, forensic analysis, and automated decision making. The Bharatiya Nagarik Suraksha Sanhita, 2023, which replaces the Code of Criminal Procedure, 1973, aims to modernize criminal procedure

and promote technology based investigation and trial processes. The BNSS encourages digital evidence, electronic communication, and scientific investigation methods, thereby creating a favourable environment for the use of Artificial Intelligence.

The integration of AI in criminal justice is not merely a technological advancement but a structural transformation. Investigative agencies now rely on data analytics, pattern recognition, and machine learning algorithms to analyse large datasets. Courts are also adopting AI assisted tools for case management, transcription, and legal research. While these developments enhance efficiency, they also introduce new legal challenges, particularly concerning procedural fairness and constitutional safeguards. Therefore, it becomes necessary to critically examine whether AI under BNSS strengthens or weakens the criminal justice system.

### **Objective of the study**

The present research aims to examine the evolving role of Artificial Intelligence in criminal investigation and trial under the Bharatiya Nagarik Suraksha Sanhita, 2023. The primary objective of this research is to analyse how Artificial Intelligence is being integrated into criminal justice processes and whether such integration strengthens or threatens procedural fairness. The research further seeks to evaluate the advantages and disadvantages of AI based investigation techniques and to assess the impact of Artificial Intelligence on the rights of accused persons and victims. Another objective of the study is to examine judicial approaches toward Artificial Intelligence and digital evidence in India. The research also aims to propose safeguards and recommendations for responsible use of Artificial Intelligence in criminal investigation and trial.

### **Research Methodology**

This research adopts doctrinal and analytical legal research methodology. The study primarily relies on analysis of statutory provisions under the Bharatiya Nagarik Suraksha Sanhita, 2023, along with relevant provisions of the Bharatiya Sakshya Adhiniyam, 2023 and Bharatiya Nyaya Sanhita, 2023. Primary sources include legislative enactments, judicial decisions, and government reports relating to Artificial Intelligence and criminal justice. Secondary sources include academic journals, research articles, policy papers, law commission reports, and authoritative legal commentaries.

## **Artificial Intelligence in Criminal Investigation under BNSS**

The Bharatiya Nagarik Suraksha Sanhita, 2023 promotes the use of digital technologies and scientific methods in investigation. Artificial Intelligence plays a crucial role in modern investigation techniques by enabling law enforcement agencies to analyse large volumes of data quickly and efficiently. AI driven predictive policing tools are increasingly being used to identify crime prone areas and potential offenders. These systems analyse historical crime data, geographic patterns, and behavioural trends to assist law enforcement agencies in preventing crimes before they occur. Such predictive policing mechanisms improve proactive policing and enhance crime prevention strategies.

Artificial Intelligence is also widely used in facial recognition technology, which assists investigators in identifying suspects through CCTV footage and surveillance images. Law enforcement agencies use AI based facial recognition systems to compare images with existing databases such as criminal records and missing persons databases. This significantly reduces investigation time and increases identification accuracy. However, concerns have been raised regarding the reliability and bias of facial recognition systems, particularly when trained on incomplete or biased datasets.

AI based forensic investigation has further strengthened criminal investigation. Artificial Intelligence assists in voice recognition, image enhancement, digital footprint analysis, and deep fake detection. These tools allow investigators to uncover hidden patterns in digital evidence that may otherwise go unnoticed. AI also assists in analysing mobile data, emails, and social media interactions, thereby improving digital investigation capabilities.

Furthermore, Artificial Intelligence facilitates smart evidence collection and management. AI driven tools assist investigators in organizing digital documents, transcribing audio recordings, and generating automated investigation reports. These technological advancements reduce manual errors and accelerate the investigation process. The use of AI in investigation under BNSS therefore enhances efficiency and strengthens evidence based investigation.

## **Artificial Intelligence in Trial under BNSS**

Artificial Intelligence is increasingly being integrated into trial procedures as well. Courts are adopting AI based case management systems to handle large volumes of cases and reduce backlog. These systems assist in scheduling hearings, organizing case files, and tracking case

progress. AI based legal research tools also assist judges and lawyers in identifying relevant case laws and legal provisions. AI also assists in analysing digital evidence presented during trial. Courts frequently deal with CCTV footage, audio recordings, and digital documents. Artificial Intelligence helps in enhancing video clarity, detecting tampering, and identifying inconsistencies in evidence. Such tools improve judicial accuracy and support informed decision making.

Virtual courts and online hearings have further accelerated the adoption of AI technologies. AI based transcription tools generate real time transcripts of court proceedings, improving documentation and transparency. AI based translation tools also assist in overcoming language barriers, thereby improving access to justice.

### **Artificial Intelligence as a Boon under BNSS**

Artificial Intelligence offers several advantages in investigation and trial under the BNSS. One of the most significant advantages is improved efficiency. AI systems analyze large volumes of data quickly, reducing investigation time and improving case resolution speed. This is particularly beneficial in complex criminal investigations involving digital evidence. AI also improves accuracy in forensic analysis. Machine learning algorithms detect patterns and anomalies that may be overlooked by human investigators. This reduces the chances of human error and improves reliability of investigation.

Another important advantage is reduction in judicial backlog. AI based case management systems assist courts in managing cases efficiently, thereby reducing delays. The use of AI in scheduling hearings and organizing case records improves overall judicial productivity. Artificial Intelligence also enhances transparency. Digital records and automated documentation reduce the risk of manipulation and corruption. Additionally, predictive policing helps law enforcement agencies prevent crimes, thereby strengthening public safety. Thus, Artificial Intelligence acts as a force multiplier for criminal justice administration under the BNSS.

### **Artificial Intelligence as a Threat under BNSS**

Despite its advantages, Artificial Intelligence also presents significant challenges. One of the major concerns is algorithmic bias. AI system depends on historical data, which may contain inherent biases. Such bias may lead to discriminatory policing and unfair targeting of certain

communities. Privacy concerns also arise due to increased surveillance and data collection. AI based facial recognition and predictive policing tools involve large scale monitoring, which may violate fundamental rights under the Constitution of India.

Another major challenge is lack of transparency. AI decision making processes are often opaque, making it difficult to understand how conclusions are reached. This lack of transparency raises due process concerns and affects fair trial rights. Additionally, AI based errors may lead to wrongful convictions. Over-reliance on AI without human oversight may compromise judicial fairness. The absence of clear legal accountability mechanisms further complicates responsibility for AI based decisions. Thus, Artificial Intelligence may pose a threat if not regulated properly.

### **Case Laws on Artificial Intelligence and Digital Investigation**

Indian courts have increasingly addressed issues related to Artificial Intelligence, digital evidence, and surveillance

1. **Justice K.S. Puttaswamy v. Union of India (2017)** - the Supreme Court recognized the Right to Privacy as a fundamental right under Article 21 of the Constitution. This judgment is highly relevant to AI-based surveillance and facial recognition technologies, as such tools involve large-scale collection of personal data. The Court held that any surveillance mechanism must satisfy the tests of legality, necessity, and proportionality. This judgment directly impacts AI-based criminal investigation.
2. **Anvar P.V. v. P.K. Basheer (2014)** - the Supreme Court held that electronic evidence must comply with statutory requirements under Section 65B of the Evidence Act. This principle becomes crucial for AI-generated evidence used during criminal trials.
3. **Arjun Panditrao Khotkar v. Kailash Kushanrao Gorantyal (2020)** - the Supreme Court reaffirmed the importance of certification for digital evidence. This judgment becomes relevant for AI-based evidence such as facial recognition reports and algorithmic analysis.
4. **State (NCT of Delhi) v. Navjot Sandhu (2005)** - also known as the Parliament Attack Case, the Supreme Court accepted electronic evidence, thereby paving the way for digital investigation and AI-based evidence. Courts have also expressed concern regarding misuse of AI generated legal materials. The Supreme Court has cautioned lawyers against citing AI generated non-existent judgments, highlighting reliability concerns of AI tools.

These judicial developments indicate that while courts are open to technological advancement, they emphasize caution and safeguards.

## Conclusion

Artificial Intelligence represents a significant advancement in the criminal justice system under the Bharatiya Nagarik Suraksha Sanhita, 2023. While AI enhances efficiency, accuracy, and transparency, it also raises concerns regarding privacy, bias, and accountability. Therefore, Artificial Intelligence under BNSS acts both as a boon and a threat. The effectiveness of AI depends on the implementation of safeguards, transparency mechanisms, and judicial oversight. A balanced approach is necessary to ensure that Artificial Intelligence strengthens the criminal justice system while protecting fundamental rights.

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