

Byte-Sized Justice: Navigating the Impact of AI on Law Enforcement and Judicial Systems in India

I. Introduction - Increasing Burden on Justice Delivery in India

With a population surpassing 1.3 billion and an expansive landmass spanning 3.28 million km² India grapples with a complex and multifaceted challenge in addressing crime. The diverse socio-economic landscape, coupled with rapid urbanisation, has spawned a diverse array of criminal activities. Statistical data presents a sombre narrative, encompassing reported crimes that range from minor thefts to more grave offences such as cybercrime and organised violence.¹ According to the National Crime Records Bureau (NCRB), the country reported over 5.8 million cognisable crimes in 2022.² The police-to-public ratio on the other hand stood at 152.8 per 100,000 persons as opposed to the sanctioned police strength ratio of 196.23 per 100,000 persons,³ indicating a 23% vacancy rate and highlighting the pressing need for innovative strategies in law enforcement. Additionally, there is a notably greater density of police stations in urban regions across the country.⁴ Out of the total 28 states, only 6 comply⁵ with the National Police Commission's 1981 suggested area coverage of 150 km² for a rural police station.⁶ This is despite the fact that 60% of the country's population resides in rural areas.⁷

Beyond the numerical metrics, the nature of crime in India is also evolving. Urbanisation, economic disparities, and the advent of technology have contributed to a shifting crime landscape. Cybercrimes, in particular, have seen a significant uptick, with the NCRB reporting a total of 65,893 cases in 2022, showing an increase of 24.4% in registration over 2021 (52,974 cases).⁸ Thus, the challenge for law enforcement agencies is not only to address traditional crimes but also to adapt to the complexities of the digital age. As criminal methodologies become more sophisticated, there is a growing imperative for a proactive and technology-driven approach to crime prevention.⁹

¹ National Crime Records Bureau, "Crime in India 2022", *Ministry of Home Affairs*, December 1 2023, <https://ncrb.gov.in/uploads/nationalcrimerecordsbureau/custom/1701607577CrimeinIndia2022Book1.pdf>.

² Ibid.

³ Shweta Mudaliar, "Police-Public Ratio Stands at 152.80 Per Lakh Person: Govt Informs Parliament", *Hindustan Times*, March 30, 2023, <https://www.hindustantimes.com/india-news/policepublic-ratio-stands-at-152-80-per-lakh-person-govt-informs-parliament-101680162971094.html>.

⁴ Jahnavi Sen, "Overcrowded Prisons; Cases Pending Per Judge Rising: India's Criminal Justice System in 9 Charts", *The Wire*, April 4, 2023, <https://thewire.in/rights/overcrowded-prisons-cases-pending-per-judge-rising-indias-criminal-justice-system-in-9-charts>.

⁵ Ibid.

⁶ Ibid.

⁷ Kumar, P., & Kumar, R. Rural Health Scenario - Role of Family Medicine: Academy of Family Physicians of India Position Paper. *Journal of Family Medicine and Primary Care*, 7(6), (November 2018), 1157–1162. https://doi.org/10.4103/jfmpc.jfmpc_254_18.

⁸ National Crime Records Bureau, "Crime in India 2022."

⁹ Purdue Global, The Growing Role of Technology in the Criminal Justice Field, *Purdue Global Blog*, April 9, 2018, <https://www.purdueglobal.edu/blog/criminal-justice/growing-role-technology-criminal-justice>.

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Even when law enforcement successfully apprehends the accused, the criminal justice system in the nation poses a significant impediment to justice delivery owing to the immense backlog of cases. As of July 2023, the backlog exceeds 50 million cases across various courts, with a staggering 88% concentrated at the district and subordinate levels.¹⁰ Despite the sanctioned number of judges for these courts standing at 25,246,¹¹ each judge, even at full capacity, would need to preside over nearly 1800 cases to address the existing backlog. According to the National Judicial Data Grid, more than 21% of civil cases and 24% of pending criminal cases have extended beyond 5 years. Alarming, around 64,000 criminal cases and 30,000 civil cases have languished unresolved for over 30 years.¹² Primarily because of the pending caseload, prisons in India have an average occupancy rate of 130%¹³ since an overwhelming 77% of the incarcerated population in India consists of undertrials - individuals who have yet to be convicted of a crime.¹⁴ This backlog of cases not only results in considerable delays in delivering justice to citizens but also contravenes the constitutional guarantee of the Fundamental Right to speedy justice enshrined in Article 21 of the Indian Constitution.¹⁵

Artificial Intelligence (AI), characterised by the emulation of human intelligence in machines, presents an opportunity to address the above challenges present in the Indian law enforcement and justice delivery systems. Globally, AI has transcended conventional boundaries to fundamentally altering the landscape of technological possibilities with applications spanning from data analytics, automation, to decision-making processes. In the broader context of public safety, AI emerges as a lynchpin, contributing significantly to predictive analytics, risk assessment, and resource optimisation.¹⁶ These applications extend beyond law enforcement, encompassing disaster response, cybersecurity, and public health, fostering a comprehensive approach to safeguarding communities on a global scale. The nuanced integration of AI technologies into various public safety facets reflects a paradigm shift, where data-driven insights and machine-learning algorithms play pivotal roles in pre-emptive strategies and reactive crisis management and justice delivery.¹⁷

Within the domain of justice delivery systems, AI manifests as a transformative force with far-reaching implications. Globally, predictive policing algorithms utilise historical crime data to forecast potential hotspots, enabling proactive resource allocation and crime prevention measures. Facial recognition systems aid in criminal identification, streamlining investigations and bolstering security efforts. The symbiosis of AI and judicial processes enhances case management, expediting data analysis of past cases and information cross-referencing for more efficient and informed decision-making. As we delve into the Indian context, the juxtaposition of ancient legal traditions - codified in Indian Penal Code of 1860, Police Act of 1861; and Criminal Procedure Code (CrPC) of 1973 - and contemporary AI applications brings unique challenges and opportunities. The nation grapples with the delicate integration of technology into a culturally diverse landscape, balancing the need for innovation with the preservation of foundational principles.

This case study explores how AI is reshaping law enforcement and criminal justice procedures globally and in India, focusing on the multitude of its applications along with the challenges it poses to effective justice

¹⁰ Press Trust of India, "More than 5 Crore Cases Pending in Courts in India", *Times of India*, July 22, 2023, <https://timesofindia.indiatimes.com/india/more-than-5-crore-cases-pending-in-courts-in-india/articleshow/102042623.cms>.

¹¹ Ibid.

¹² National Judicial Data Grid, "Pending Dashboard", *Ministry of Home Affairs*, December 31, 2020, https://njdg.ecourts.gov.in/njdgnew/?p=main/pend_dashboard.

¹³ Jahnvi Sen, "Overcrowded Prisons; Cases Pending Per Judge Rising: India's Criminal Justice System in 9 Charts.",

¹⁴ Ibid.

¹⁵ Constitution of India, article 21. <https://legislative.gov.in/constitution-of-india>.

¹⁶ Dr. Kamal Kishore Singh, "AI in Police Work", *State Crime Records Bureau, Bihar*, <https://scrb.bihar.gov.in/assets/AI%20in%20Police%20Work.pdf>.

¹⁷ Ibid.

delivery in the country. The case study also presents the internationally recognised framework to outline the principles deployed to assess the use of AI in law enforcement and judicial systems.

II. The Use of AI in Justice Delivery System

The use of artificial intelligence in justice delivery can be divided into two aspects.¹⁸

- A. **Law Enforcement** - encompassing the use of AI in detecting and preventing crimes; carried out by the police and other law enforcement agencies
- B. **Judicial Process** - covering the use of AI in sentencing, and granting bail or parole; carried out by the judiciary system.

A. Use of AI in Pre-Emptive Detection of Crimes

Artificial intelligence possesses the potential to significantly enhance the efficiency of predictive policing. Indeed, there are existing algorithms that have been developed to predict the probability of criminal activities occurring in specific areas and timeframes with a high level of precision.¹⁹ These algorithms utilise historical patterns of criminal behaviour to identify crime hotspots,²⁰ and to proactively discourage crimes by implementing heightened patrolling measures. An illustrative example is PredPol, a California-based company that originated from a collaboration between the University of California, Los Angeles (UCLA) and the Los Angeles Police Department.²¹ This company utilises historical data spanning two to five years from a client police department to train a machine-learning algorithm, which is then regularly updated on a daily basis.²²

AI can also analyse extensive records to predict the likelihood of individuals repeating criminal behaviour. Researchers at the Research Triangle Institute, collaborating with the Durham Police Department and the Anne Arundel County (Maryland) Sheriff's Office, are developing an automated triage tool which utilises algorithms to examine datasets containing over 340,000 warrant records, to determine the time frame until the next occurrence of a crime.²³

In India, the police in the state of Uttar Pradesh are using a video analytics platform named JARVIS to extract insights from extensive CCTV video footage. By employing AI and computer vision, the platform provides real-time alerts, thereby markedly reducing the duration required to generate actionable data.²⁴ Similarly, the

¹⁸ Dan Hunter, Mirko Bagaric & Nigel Stobbs, "A Framework for the Efficient and Ethical Use of Artificial Intelligence in the Criminal Justice System", *Florida State University Law Review* Vol. 47 Issue 4, 2020, <https://ir.law.fsu.edu/lr/vol47/iss4/7>.

¹⁹ Lyria Bennett Moses & Janet Chan, Algorithmic Prediction in Policing: Assumptions, Evaluation, and Accountability, *Policing and Society*, November 18, 2016, DOI: 10.1080/10439463.2016.1253695.

²⁰ Dan Hunter, Mirko Bagaric & Nigel Stobbs, "A Framework for the Efficient and Ethical Use of Artificial Intelligence in the Criminal Justice System."

²¹ Boriss Cilevičs, "Justice by Algorithm – The Role of Artificial Intelligence in Policing and Criminal Justice Systems", *Committee on Legal Affairs and Human Rights, Council of Europe*, October 1, 2020, <https://pace.coe.int/en/files/28723/html>.

²² Ibid.

²³ Christopher Rigano, "Using Artificial Intelligence to Address Criminal Justice Needs", *National Institute of Justice*, January 2019, <https://www.ojp.gov/pdffiles1/nij/252038.pdf>.

²⁴ Dr. Parvez Hayat and Nidhi Singh, "How AI Can Play a Catalytic Role in Managing Criminal Justice System for More Equitable Outcomes", *Economic Times*, February 11, 2022, <https://government.economictimes.indiatimes.com/news/digital-india/how-ai-can-play-a-catalytic-role-in-managing-criminal-justice-system-for-more-equitable-outcomes/89502089>.

police in Gautam Budh Nagar district have also recently started using Geospatial Data Intelligence Platform (GDIP), a crime data search engine powered by artificial intelligence.²⁵ This platform integrates crime and policing data from various agencies, providing investigators with immediate access to records and the ability to analyse crime trends and map crime hotspots.²⁶ Aside from the aforementioned, India is also using AI to investigate anti-corruption cases.²⁷ For instance, AI-enabled financial behaviour analysis has been used in various investigations to support the evidence in the courts of law.²⁸ Finally, these AI tools also help in monitoring the digital behaviour of criminals.²⁹

B. Use of AI in Judicial Process

The judicial system faces enduring challenges, notably in the inconsistency of sentencing for similar offences and inefficiencies within court proceedings. The crucial task of reviewing case files for fair sentencing demands considerable time, further compounded when dealing with a high volume of cases, impeding the timely resolution of legal matters. By eliminating human irrationality and sentiments, AI sentencing can ensure a consistent approach to sentencing.³⁰ Additionally, the introduction of AI in sentencing offers the significant advantage of expediting the decision-making process, as algorithms can resolve problems much faster than humans. This efficiency is crucial in reducing the current time gap between an offender's arrest and sentencing. In the context of AI in bail decisions, the abundance of available data allows for the identification of characteristics of defendants indicative of a high risk of absconding.

In the Sabah and Sarawak states of Malaysia, AI is being piloted to handle the task of reviewing and processing past case files submitted by lawyers, a task previously done manually.³¹ The AI analyses cases inputted into the system along with relevant parameters, generating recommended sentences within minutes. The programme currently focuses on two specific offenses: possession of dangerous drugs in Sabah and rape/sexual assault offenses in Sarawak, chosen due to the availability of extensive data. Notably, judges retain their discretion, and the AI's recommendation can be disregarded if the unique aspects of a case are not covered in the parameters analysed.³² In the United States, a machine-learning based software called Correctional Offender Management Profiling for Alternative Sanctions (COMPAS) is already being used.³³ COMPAS, in a nutshell, uses sophisticated research to guide jurists on the types of people that are most likely to reoffend.³⁴

²⁵ Ashni Dhaor, "Gautam Budh Nagar Police to Use Facial Recognition, AI to Identify Offenders in Public Spaces", *Hindustan Times*, July 21, 2023, <https://www.hindustantimes.com/cities/noida-news/gautam-budh-nagar-police-to-use-facial-recognition-ai-to-identify-offenders-in-public-spaces-101689963342947.html>.

²⁶ Ibid.

²⁷ INDIAai, "UP ADGP Says AI has Revolutionised the Investigation of Anti-Corruption Cases", *Ministry of Electronics and Information Technology*, October 12, 2023, <https://indiaai.gov.in/news/up-adgp-says-ai-has-revolutionised-the-investigation-of-anti-corruption-cases>.

²⁸ Ibid.

²⁹ Ibid.

³⁰ Michael E. Donohue, "A Replacement for Justitia's Scales?: Machine Learning's Role in Sentencing", *Harvard Journal of Law & Technology* Volume 32, Number 2, Spring 2019, <https://jolt.law.harvard.edu/assets/articlePDFs/v32/32HarvJLTech657.pdf>.

³¹ Ming En Liew, "How Courts in Sabah and Sarawak are Sentencing with the Help of AI", *GovInsider Asia*, November 24, 2021, <https://govinsider.asia/intl-en/article/how-courts-in-sabah-and-sarawak-are-sentencing-with-the-help-of-ai-abang-iskandar-malaysia>.

³² Ibid.

³³ Michael E. Donohue, "A Replacement for Justitia's Scales?: Machine Learning's Role in Sentencing."

³⁴ Ibid.

The Chief Justice of India has been a vociferous proponent of using AI in judiciary, particularly its application in extracting useful information from the vast number of documents that accompany a case.³⁵ The Supreme Court of India has introduced SUPACE, a portal that employs machine learning to handle the influx of data related to diverse cases.³⁶ This hybrid system effectively combines human intelligence with machine learning, serving as a powerful complement to human decision-making.³⁷ The AI-driven tool is specifically designed to process information, making it accessible to judges for their consideration.³⁸ However, it does not actively engage in the decision-making process. In March 2023, the Punjab and Haryana High Court, for the first time, used ChatGPT's assistance in a bail matter involving a murder case.³⁹ The court specified that the assistance aimed to provide a comprehensive overview of bail jurisprudence, emphasising that it did not constitute an expression of opinion on the case's merits.⁴⁰

III. Legal & Policy Landscape for AI in India

In order to evaluate whether the use cases of AI in law enforcement and judicial processes mentioned above can actually be adopted in practice, it is necessary to understand the legal context within which the usage of AI is situated. The legal and policy landscape determines where, how and by whom AI may be used.

The first major recognition of AI by the Indian government was in 2018 through the National Artificial Intelligence Strategy.⁴¹ The national strategy's policy focus was limited to the adoption of AI in key sectors related to the country's growth and development.⁴² An approach paper titled 'Principles for Responsible AI' was subsequently drafted by the national think tank, NITI Aayog in 2021, acting as a roadmap for the creation of an ethical and responsible AI ecosystem.⁴³ Divided into two segments focused on system and societal considerations, the paper focuses on certain key principles including safety, reliability, non-discrimination, transparency and accountability.⁴⁴

Draft laws such as the Draft Digital India Act 2023⁴⁵ aimed at revamping India's existing digital laws for a digital economy and the Draft National Data Governance Framework Policy outline certain aspects of AI such as

³⁵ Sounak Mukhopadhyay, "Artificial Intelligence in Judiciary: CJI DY Chandrachud Speaks on Possibilities of AI, Role of Judges in Such Cases", *Mint*, May 6, 2023, <https://www.livemint.com/news/india/artificial-intelligence-in-judiciary-cji-dy-chandrachud-speaks-on-possibilities-of-ai-role-of-judges-in-such-cases-11683360787252.html>.

³⁶ Snehanishu Shekhar, "Supreme Court Embraces Artificial Intelligence, CJI Bobde Says Won't Let AI Spill Over to Decision-Making", *India Today*, April 7, 2021, <https://www.indiatoday.in/india/story/supreme-court-india-sc-ai-artificial-intelligence-portal-supace-launch-1788098-2021-04-07>.

³⁷ Ibid.

³⁸ Ibid.

³⁹ Ajay Sura, "In a First, Punjab and Haryana High Court Uses ChatGPT While Deciding Bail Plea", *The Times of India*, March 28, 2023, <https://timesofindia.indiatimes.com/city/chandigarh/in-a-first-punjab-and-haryana-high-court-uses-chatgpt-while-deciding-bail-plea/articleshow/99068051.cms>.

⁴⁰ Ibid.

⁴¹ NITI Aayog, "National AI Strategy #AIforAll", June 2018, <https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf>.

⁴² Ibid.

⁴³ NITI Aayog, "Towards Responsible AI for All", February 2021, <https://www.niti.gov.in/sites/default/files/2021-02/Responsible-AI-22022021.pdf>.

⁴⁴ Ibid.

⁴⁵ Ministry of Electronics and Information Technology, "Proposed Digital India Act, 2023", *Digital India Dialogues*, March 9, 2023, https://www.meity.gov.in/writereaddata/files/DIA_Presentation%2009.03.2023%20Final.pdf.

delineating strictly prohibited uses or areas for AI usage.⁴⁶ Other proposals focus on creating a specific set of Indian AI standards in line with internationally accepted standards and recognise the importance of a separate statutory authority to oversee the usage of AI technologies.

However, despite these initiatives, there are two notable features on the development of AI policy in India:

1. All policy initiatives focused on AI in India narrowly focus on safeguarding the rights of consumers as either users of AI-based technologies or customers of businesses that use AI in one of their key functions such as for differential pricing. To that extent, these policy initiatives adopt a narrow view of the AI ecosystem, assuming that the role of government is limited to mere facilitation and regulation whereas actual usage of AI or AI-based services is limited to businesses and consumers. As a result, a policy vacuum exists in terms of outlining the rights of individuals as citizens when government bodies use AI to fulfil various functions including law enforcement and judicial proceedings. Similarly, there is a lack of any guiding principles that outline what constitutes responsible usage of AI for government.
2. A specific law or set of laws that govern the usage of AI in India are yet to be passed into effect. As of 2023, no law exists that regulates AI usage for citizens, companies or even governmental bodies. Draft laws that mention or include AI provide peripheral focus to AI usage as a part of a larger digital economy.

IV. Potential Challenges and Shortcomings with the Usage of AI in Justice Delivery

The administration of justice is a crucial aspect of the state's duties, carrying substantial powers that often involve intrusion and coercion. The use of these powers, designed to uphold justice, has enduring effects on the lives of individuals subjected to the legal system and on society overall. Thus, introducing non-human elements into the decision-making process within the justice delivery system could pose considerable risks.⁴⁷ In particular, the following list of non-exhaustive risks outlined in a paper titled 'Algorithms and Justice' by Harvard University⁴⁸ need special consideration:

- **Bias:** AI algorithms help identify regions or circumstances requiring pre-emptive policing, make sentencing decisions and decisions on bail and parole all based on the data that has been fed into the AI system.⁴⁹ Historically individuals from lower socio-economic backgrounds or disadvantaged communities are more likely to have been previously convicted for various types of crimes, owing to biases of judges or having lesser access to quality legal representation.⁵⁰ As a result, data on trials and convictions are likely to contain bias which can entrench biased AI decisions. A recent report on the state of the judicial system in 2022 found that no State within India has been able to fulfil the quota

⁴⁶ Ministry of Electronics and Information Technology, "Draft National Data Governance Framework Policy", *Digital India Dialogues*, May 2022, <https://www.meity.gov.in/writereaddata/files/National-Data-Governance-Framework-Policy.pdf>.

⁴⁷ Boriss Cilevičs, "Justice by Algorithm – The Role of Artificial Intelligence in Policing and Criminal Justice Systems", *Committee on Legal Affairs and Human Rights, Council of Europe*, October 1, 2020, <https://pace.coe.int/en/files/28723/html>.

⁴⁸ Chris Bavitz, "Algorithms and Justice Ethics and Governance of Artificial Intelligence Initiative", *Berkman Klein Center for Internet & Society at Harvard University*, March, 2023, <https://cyber.harvard.edu/sites/default/files/2019-10/2019AlgorithmsJusticeOnePager.pdf>.

⁴⁹ Ibid.

⁵⁰ Ibid.

of seats reserved for judges belonging to historically disadvantaged communities classified as Scheduled Caste, Scheduled Tribes or Other Backward Classes.⁵¹ Judges at all levels of the Indian judicial system historically and currently being predominantly upper-caste and male are highly likely to have introduced bias against judicial decisions in cases involving individuals of lower caste or even against women.⁵²

Further biases in AI algorithms can lead to significant error rates, which counter the perceived benefits of cost reduction and improved efficiency from using AI in the first place. For example, in a trial conducted in 2018 in the United Kingdom, facial recognition software was used to identify criminal suspects - of the 104 that the software identified, only 2 were accurate.⁵³

- **Transparency:** In a state such as India, transparency in the functioning of the justice delivery systems of the government is of utmost importance to the welfare of its citizens and also to uphold the principles of being a democratic welfare state. In the absence of clear laws that delineate the boundaries of usage of AI for government bodies, there is a great scope for misuse of AI-based tools by law enforcement bodies. In the absence of any regulatory framework for use of AI currently, it is currently unclear under what circumstances government bodies are permitted to use AI-based tools, for which government functions and what are permissible uses of AI-based tools.

Further, it is unclear what rights citizens have in the context of AI usage by governments in fulfilling its ordinary functions. For instance, in order to use AI-based tools, government bodies must utilise large volumes of data pertaining to its citizens. In this context, it is unclear how privacy is defined and under what circumstances and for which types of data the government has to get explicit consent from its citizens. This raises important concerns regarding misuse of AI-based tools by government bodies.

For example, it was reported in 2021 that the Indian government had allegedly purchased an AI-based spyware software known as Pegasus and used it to hack into the phones of several individuals.⁵⁴ Upon media and judicial questioning, the government indicated spying on these individuals for national security reasons.⁵⁵ It refused to provide further details on how these individuals were identified as national security threats or why tracking them by hacking into their phones was crucial for national security.⁵⁶ At the same time, the list of individuals whose phones were hacked is predominantly constituted of members of political opposition to the government, media persons and activists⁵⁷ - indicating a strong likelihood of misuse of AI tools by the government. While the use of AI-based law

⁵¹ Jahnvi Sen, "Overcrowded Prisons; Cases Pending Per Judge Rising: India's Criminal Justice System in 9 Charts."

⁵² Elliott Ash, Sam Asher, Aditi Bhowmick, Sandeep Bhupatiraju, Daniel Chen, Tanaya Devi, Christoph Goessmann, Paul Novosad, and Bilal Siddiqi, "In-Group Bias in the Indian Judiciary Evidence from 5 Million Criminal Cases", *National Bureau of Economic Research*, October 28, 2023, https://users.nber.org/~dlchen/papers/India_Courts_In_Group_Bias.pdf.

⁵³ Shruti Mantri, "Need for Responsible AI in Policing and Crime Detection", *Forbes India*, July 25, 2023, <https://www.forbesindia.com/article/isbinsight/need-for-responsible-ai-in-policing-and-crime-detection/86965/1>.

⁵⁴ David Pegg and Sam Cutler, "What is Pegasus Spyware and How does it Hack Phones?", *The Guardian*, July 18, 2021, <https://www.theguardian.com/news/2021/jul/18/what-is-pegasus-spyware-and-how-does-it-hack-phones>.

⁵⁵ Ibid.

⁵⁶ Ibid.

⁵⁷ Ibid.

enforcement may reduce the cost and improve efficiency of surveillance and criminal identification, it also brings concerns of privacy violations and infringement of citizens' rights.

- **Interpretability and Dynamic Adaptation:** In the judicial process, the principles considered in the process of arriving at the final decision on a case are considered as important as the decision itself.⁵⁸ They provide context under which the case is considered and provide legitimacy to the decision.⁵⁹ The usage of AI in making judicial decisions involves an opaque process of arriving at the decision with little clarity of the methodology used or principles applied in arriving at the decision.⁶⁰ It also greatly increases the risk of errors in the decision-making process going both unrecognised and thereby unrectified.⁶¹
- **Due Process:** The use of AI to decide judicial cases as well as guide law enforcement can be challenged as being unconstitutional.⁶² The Criminal Procedure Code currently does not make any provisions for using technology to make final decisions on judicial cases. Further, the use of AI in such processes can be argued to be detrimental to the democratic process by reducing the space available for debates and dialogue.

For example, the AI pilot in Sabah and Sarawak in Malaysia for sentencing recommendations has faced concerns that the technology was being used before lawyers, judges and the public fully understood it.⁶³ Similarly since the existing Criminal Procedure Code (CrPC) of India does not provide for judgements meted out by AI, concerns of unconstitutionality may arise in India similar to the example of Sabah and Sarawak.⁶⁴

- **Competing Priorities:** In the current scenario, citizens can challenge the usage of AI-based tools by the executive wing of the government in judicial courts on grounds of unconstitutionality or impingement on their rights. However, there is a lack of an independent authority that holds expertise in AI and is equipped to oversee and audit the usage of AI-based tools by the Indian government to ensure permissible use. In such a scenario, the usage of AI-based tools in judiciary creates further complications by providing no avenue for citizens to challenge this usage on grounds of unconstitutionality or impingement of rights.

⁵⁸ General Council of the Judiciary Working Group for the Creation of a Code of Ethics for the Legal Profession, "Principles of Judicial Ethics", *United Nations Office on Drugs and Crime*, December 16, 2016, https://www.unodc.org/documents/ji/discussion_guides/ENCJ_Supporting_Documents.pdf.

⁵⁹ Ibid.

⁶⁰ Krishna Ravishankar & Parul Anand, "AI Judges: The Question of AI's Role in Indian Judicial Decision-Making", *Centre for Comparative Constitutional Law and Administrative Law National Law University Jodhpur*, August 8, 2023, <https://www.calj.in/post/ai-judges-the-question-of-ai-s-role-in-indian-judicial-decision-making>.

⁶¹ Ibid.

⁶² Ajay Kumar Sharda, Artificial Intelligence and its Impact on the Indian Judiciary, *Chandigarh Judicial Academy e-Newsletter*, April 2023, <https://cja.gov.in/E%20newsletter/Enewsletter%20for%20April%202023.pdf>.

⁶³ Rina Chandran, "As Malaysia Tests AI Court Sentencing, Some Lawyers Fear for Justice", *Reuters*, April 12, 2022, <https://www.reuters.com/article/malaysia-tech-lawmaking/feature-as-malaysia-tests-ai-court-sentencing-some-lawyers-fear-for-justice-idUSL8N2HD3V7/>.

⁶⁴ Ibid.

V. Ethical Standards for the Use of AI in Justice Delivery

As mentioned in the earlier part of the paper, there exists no policy or legal framework that govern the use of artificial intelligence in justice delivery system in India. Notwithstanding this, its government, particularly its law enforcement agencies as well as its judiciary, have already started utilising various artificial intelligence tools in order to administer justice. As mentioned in the preceding section, the use of artificial intelligence in justice delivery raises concerns such as the potential to perpetuate bias, and to violate due process. This is true not only for India, but for the rest of the world. Thus, the INTERPOL, together with the United Nations Interregional Crime and Justice Research Institute (UNICRI), have come up with the **Principles for Responsible AI Innovation**,⁶⁵ which intends to give guidance to different law enforcement agencies across different jurisdictions as to how to properly integrate the use of artificial intelligence into their operations.

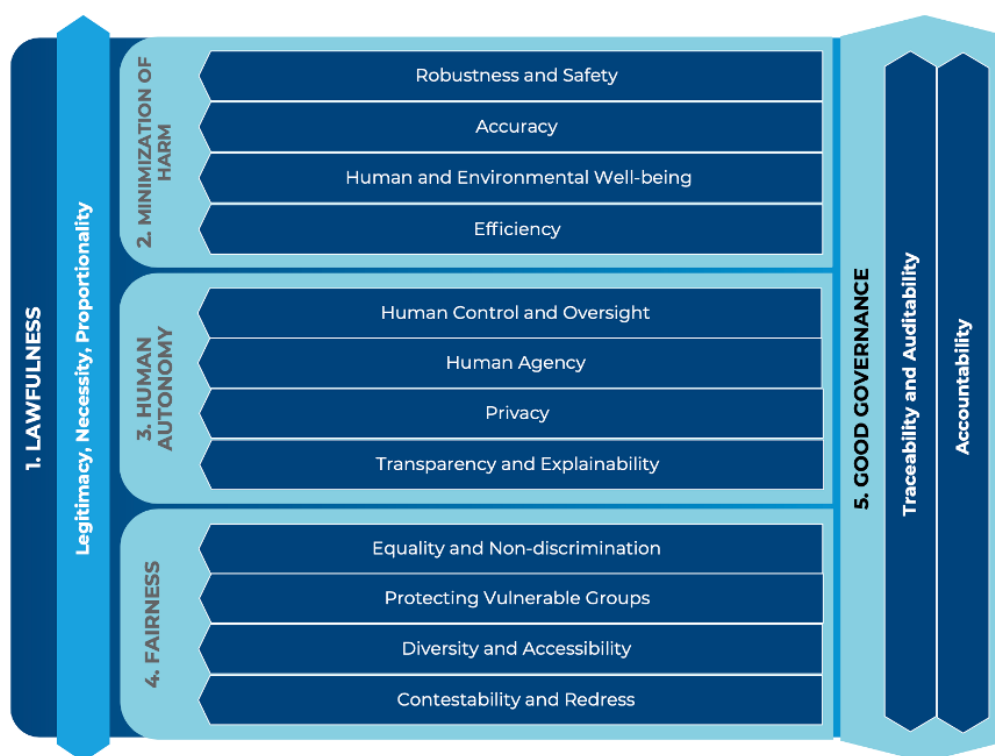


Figure 1. Core and Instrumental Principles⁶⁶

The *Principles for Responsible AI Innovation* can be dissected into five core principles, namely: (1) lawfulness; (2) minimisation of harm; (3) human autonomy; (4) fairness; and (5) good governance. These core principles also have their respective instrumental principles that would supplement them and ensure they are protected.⁶⁷

The first core principle **lawfulness** pertains to adherence to the law, which involves acknowledging and following the existing laws and regulations in a particular jurisdiction where the law enforcement agencies

⁶⁵ INTERPOL and United Nations Interregional Crime and Justice Research Institute, “Toolkit for Responsible AI Innovation in Law Enforcement”, INTERPOL, June 8, 2023, <https://www.interpol.int/en/News-and-Events/News/2023/INTERPOL-and-UNICRI-release-blueprint-for-responsible-use-of-AI-by-law-enforcement>.

⁶⁶ Ibid

⁶⁷ Ibid.

function, while also having the commitment to uphold human rights. This core principle is segmented into the instrumental principles of legitimacy, necessity, and proportionality. Legitimacy means that law enforcement agencies should only interfere with individuals' rights when they have a legitimate justification to do so. Necessity, on the other hand, means that law enforcement agencies should only intervene in individuals' rights when such actions are necessary to achieve a recognised legitimate objective. Finally, the principle of proportionality means that law enforcement agencies must weigh the infringement upon human rights against the justification for such actions, aligning with principles present in international humanitarian law.

The second core principle **minimisation of harm** means that law enforcement agencies should proactively prevent or eliminate any potential risks of harm to individuals and communities that may emerge in the course of AI development, procurement, and utilisation. This core principle is further segmented into the instrumental principles of robustness and safety, accuracy, human and environment wellbeing, and efficiency. Robustness and safety means that AI systems should be able to consistently perform well in various situations and identify and prevent potential risks of harm. To ensure robustness, law enforcement agencies should ensure that the AI systems that they plan to deploy are both dependable and secure. Accuracy on the other hand, refers to the extent to which an AI system can accurately make predictions, offer recommendations, or make decisions. Meanwhile human and environmental wellbeing entails the safeguarding and enhancing by law enforcement agencies of the welfare of individuals and the environment throughout their AI innovation endeavours. Finally, efficiency means that law enforcement agencies should ensure the balance between the costs and benefits of utilising specific AI systems in terms of time, money, effort, and environmental impact, among others.

The third core principle **human autonomy** means that law enforcement agencies should interact with AI in a manner that safeguards the capacity and right of humans to self-govern. This principle further involves the instrumental principles of human control and oversight, human agency, privacy, and transparency and explainability. Human control and oversight refers to the capability and opportunity for humans to effectively supervise, engage, and intervene with an AI system during its development and usage. On the other hand, human agency denotes a person's ability to act upon their own decisions and pursue their goals without manipulation or coercion. Meanwhile, the principle of privacy means that agencies should engage with AI systems in a manner that protects the private sphere of individuals, including users of the AI system, victims, suspects, and the general public. Finally, transparency and explainability requires that law enforcement agencies ensure the developers of their AI system disclose all necessary information and documentation to its users.

The fourth core principle **fairness** essentially provides that law enforcement agencies should ensure, all throughout their interaction with AI systems, a just and non-discriminatory treatment of individuals and groups. This principle has the instrumental principles of equality and non-discrimination, protecting vulnerable groups, diversity and accessibility, and contestability and redress. The first instrumental principle essentially calls for the equal treatment and opportunities for all stakeholders, without any unnecessary discrimination against specific individuals or groups. The instrumental principle of protecting vulnerable groups, on the other hand, emphasises the need to give special attention to groups vulnerable to particular AI systems. Meanwhile diversity and accessibility requires AI systems to be inclusive and to be without discrimination based on age, gender, or other characteristics. The goal of this instrumental principle is to mitigate discrimination. The principle of contestability and redress requires that necessary measures be in place to allow affected stakeholders to challenge decisions. Finally, redress means providing a remedy to these affected people.

The final core principle is **good governance** which basically states that agencies should strive to establish an overarching structure to allow for auditing and extracting accountability, which would cultivate a culture of

responsible AI innovation. Good governance has the instrumental principles of traceability and auditability, as well as accountability. Traceability and auditability allows law enforcement agencies to monitor the development and use of the AI system to mitigate any negative consequences. Thus, this principle expects agencies to create policies that would ensure that the decision-making process is traceable and auditable. On the other hand, accountability requires the creation of mechanisms that would allow stakeholders to identify who is responsible for decisions made using the AI system.

In sum, these principles aim to guide law enforcement agencies to ensure that their use of AI system to administer justice would be ethical and human-rights compliant. Notably, in order to properly utilise these principles, the INTERPOL and UNICRI advise that law enforcement agencies should not only understand and apply the principles but also ensure to engage with the stakeholders involved and monitor the impact of the use of the AI system and correct it if necessary.⁶⁸ These processes should be followed, without particular order, in the entire life cycle of the AI system (Figure 2).

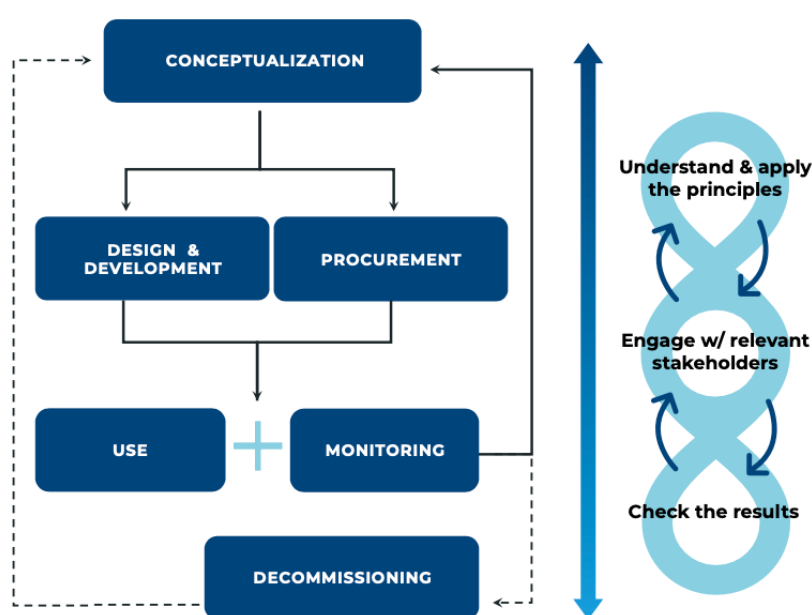


Figure 2. Putting the Principles into Practice.⁶⁹

VI. Conclusion

The current problems in the administration of justice in India outlined in the earlier part of this paper provide an easy justification for the India government and its agencies to use artificial intelligence in order to improve its justice delivery system. Thus, despite the absence of any specific laws on AI, as well as the existence of identified challenges related to the use of AI in the justice delivery system, law enforcement agencies as well as the judiciary of India have started utilising artificial intelligence. Thus, there is a need for the government to adopt legal and policy frameworks and guidelines that would ensure the maximisation of this emerging technology but at the same time ensure that the utilisation thereof would be ethical and human rights-compliant.

⁶⁸ Ibid.

⁶⁹ Ibid.

Discussion Questions

1. How is AI being used in the criminal justice system in India?
2. Can you identify possible backfires with how AI is being used in justice delivery currently?
3. How does India currently regulate the use of AI in law enforcement?
4. Can the usage of AI-based tools by the judicial system lead to a conflict of interest in India? Explain how and why?
5. Considering the current state of use of AI systems in law enforcement in India, what can be done to improve the AI legal landscape so that it becomes adherent to the principles set forth by INTERPOL and UNICRI?