



# A LEGAL STUDY ON ROLE OF AI IN CRIMINAL JUSTICE SYSTEM IN INDIA

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**Abstract:** The criminal judicial jurisprudence has been suffering with pendency of cases, insufficient number of Judges, numeral adjournment due to inexplicable reasons, excessive cases of under trails, lack of proper legal research, poor record management, legal rigidity, lack of legal aid mechanism and inappropriate ratio of judge per person. The criminal justice system needs wheel of reforms, to protect and best serve the right of fair trial. AI is the technological development that means ability of a machine possessing rationality to act over data including skills of problem solving & machine learning. The technological launch of Artificial Intelligence has opened the door of opportunities in technological as well as other spheres of disciplines including health sector, legal sector, agricultural etc.

AI can act as a catalyst for timely, effective and quality justice. So, that the pendency of the cases can be minimized. In this research work, emphasis is made with regards to criminal justice system. In this research project, the researcher has studied, analysed and discover scope of Artificial Intelligence in Criminal Justice system in India with its relevant features, merits and demerits from perspective of: judges, firms, litigants, prisoner and victim. The Supreme Court already has taken a step towards this by introducing e-governance mechanism by launching SUPACE, LIMBS, SUVAS. The concept of AI can bring speed to the judicial system with legal Analytics, record maintenance, transparency, organize vast data of filing of cases highlighting important facts and issue, research of law and legal principles relevant to case that can save time of judge and advocates, can provide relevant case similar to case in hand for supporting argument. AI has wide usage from document analytical job where it can give estimation of possible outcomes, to propose optimal solution without any scope of biasness. Also, AI has an unprecedented scope of upgrading legal research in India for producing better quantitative and qualitative results. AI can be the tool of predictive justice in India.

**Index Terms** - Criminal Justice system, Artificial Intelligence, machine learning, E- Governance, SUPACE, LIMBS, SUVAS, Predictive Justice, Automation and Human Intelligence

## CHAPTER 1

### 1.1 INTRODUCTION

Justice is the ultimate goal of law. Upholding the morality, upright the just claim and administering law is the essence of Justice delivery system. The term Justice is an abstract concept means fairness, righteous conduct whereas Justice delivery means justice is being given to claimants, it is a concrete concept of settling claim over principle of fairness. Indian system of justice delivery has evolved from the principle of “dharma”, later transformed to modern concept rooted in Constitutional preamble and other provisions. The criminal system of Justice delivery is suffering with inefficiencies in India, where huge pendency of cases are running throughout hierarchy of courts, numeral undertrial prisoners are waiting over que, adjournment due to inexplicable reasons, lack of legal research, insufficient legal aid mechanism and poor ratio of Judges over per person ratio, most of the problems owe to the large population size.

The criminal justice system needs wheel of reforms, to protect and best serve the right of fair trial. This research guides this legal issue of utmost importance with Artificial Intelligence, a software development of modern world. Also, Indian system is looking for suitable solutions where digitalization, technological process, other reforms are proposed and processed. Introducing AI, has also been proposed as possible substantial reform remedying apparent defects in justice delivery system. AI has ability to observe historical pattern, circumstances and predicting result to facilitate in discovery of crimes, deter crimes and rehabilitation of offenders based on his character study. A software with features of augmented intelligence can be installed in assistance to courts, imprison authorities to fasten the delayed justice. Access to justice has grown to be particularly challenging for those who are poor and oppressed. These are conditions, it becomes extremely important for all of the legal system's stakeholders to reach some real time reforms with technological support. Supreme Court in 2019 constituted Committee on AI, and announced announcement for launching AI in Justice system to bring efficacy and credibility. Later on, e-court project was introduced in India by law minister. Few Applications have already been announced and successfully working including SUPACE, SUVAS & LIMBS. The potential of AI has been sought that it may improve administrative system, research mechanism and argumentation skills.

McCarthy, the credited father of AI, defined AI means “the science and engineering of making intelligent machines”. AI enables machine to perform operationalized tasks in an intelligible manner that produce considerable results. AI is a software development possessing rational and learning skills, able to perform self-learning, problem solving and automated tasks. The technology is in pre-mature stage and still growing. There are two types of AI has been discovered: firstly, based on capabilities including Artificial Narrow Intelligence (ANI), Artificial General Intelligence (AGI) & Artificial Special Intelligence (ASI). ANI has been developed and is in functional mode, where rest two are on-going discoveries. Secondly, based on functionalities has four subsets including: Reactive machine, limited theory, Theory of mind and self-awareness. It has been realised that AI (hereinafter AI shall refer to ANI) is a boon exploration stretching wings of technology to increase the efficiency in criminal justice system to facilitate productive outcomes. It also has been assumed that once AGI will be discovered and functional, it can be further employed as an effective aid of judgement making process. ANI portals of Supreme Court have substantially directed this research. Also, an attempt has been made for analysis AI in judicial mechanism with different Perspectives ranging from judges, advocates,

firms intruding AI as Contract Analytics, Document Analytics, Solution building, its potential is undermined and can robust ODR aiding to relieving litigation rate in Court from few cases. Thereafter, AI shall be considered as improving instructor facilitating Data selection out of big data over any topic, big data received at filing, preparing arguments, briefs and creating substantial academic novelty data, and thereby applying legal reasoning, aptitude and logical skills.

Being a software, employing AI in India is backed by many limitations due to slow pace of infrastructural development at lower judicial courts owing to technological backwardness. The present situation ideates AI in higher judiciaries. Many reforms shall take a call before diffing merits if AI in subordinate judiciaries, backed by strong policy and execution.

## 1.2 LITERATURE REVIEW

### DOMESTIC REPORTS

**Dr. Justice V.S. Malimath<sup>1</sup>**, has suggested reforms in criminal justice system, including: separating police investigative wing from Law & order wing, inquisitorial model of investigation, controlling Article 20(3) of Constitution in a way to restrict right to silence, ease down the rule of “innocence until proven guilty” rule to enable court to act over sufficient proofs rather than going for beyond doubt rule, aware accused and victims over rights and increasing number of judges for relieving pendency of cases. All are few essential suggestions.

**LAW COMMISSION 254<sup>TH</sup> REPORT<sup>2</sup>**- the report was presented under 20<sup>th</sup> Law Commission that addressed delay and arrears problems of criminal justice system, defined the related terms including pendency, delay, arrears and backlog. The report also highlighted issues of inadequate ratio of judges to people and rate of disposal of case.

**REPORT OF COMMITTEE – D ON CYBER SECURITY, LEGAL AND ETHICAL ISSUES<sup>3</sup>**, in this report, it has been explained that how machine learning capabilities of AI which after noticing historical pattern can deter unauthorized access to data, false identities and anomalies. AI can strengthen cyber security regime which is a very sensitive area with advent of increasing cyber-crimes. Later, it has been high-lighted that sharing AI experiment over open source to showcase success and publishing work of experiment by global companies can benefit bad actors for malicious use of AI.

**Report of Artificial Intelligence Committee of Supreme court over invitation criteria to firm for developing suitable AI for court<sup>4</sup>**, this report has been studied to ascertain the background process and essentials before employing AI and how to develop AI infrastructure. In this document, SC committee has explained that AI should possess natural language reader for understanding legal language, hierarchal classification of content of cases, automation in e-filing and similar requirement. The document has further

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<sup>1</sup> *Committee on Reforms of Criminal Justice System Government of India*, Ministry of Home Affairs, available at: [https://www.mha.gov.in/sites/default/files/criminal\\_justice\\_system.pdf](https://www.mha.gov.in/sites/default/files/criminal_justice_system.pdf)

<sup>2</sup> *Arrears and Backlog: Creating Additional Judicial (wo)manpower*, The 20th Law Commission was constituted for a period of three years from 1st September, 2012 by the Government of India, Ministry of Law and Justice, Department of Legal Affairs, available at: [https://lawcommissionofindia.nic.in/report\\_twentieth/](https://lawcommissionofindia.nic.in/report_twentieth/).

<sup>3</sup> Ministry of Electronics and IT, Government of India (MeitY), Available at: [https://www.meity.gov.in/writereaddata/files/Committees\\_D-Cyber-n-Legal-and-Ethical.pdf](https://www.meity.gov.in/writereaddata/files/Committees_D-Cyber-n-Legal-and-Ethical.pdf).

<sup>4</sup> *Developing Artificial Intelligence Solution for automation of scrutiny of cases in the Supreme Court of India*, Available at: [https://main.sci.gov.in/pdf/TN/24122020\\_044510.pdf](https://main.sci.gov.in/pdf/TN/24122020_044510.pdf)

emphasized the prior need of training to court staff for using AI software, support of 5 year for bug fixing in AI. The bidder has been made responsible for maintenance of AI system, upgradation and smooth working. A service termination clause has been added to empower SC. The document also provided that document produced by AI can be modified time-to-time as per recent updates of case.

**Rohit Satish and Tanay Mahindru**<sup>5</sup>, in 2018, NITI Aayog launched the National Strategy for Artificial Intelligence (NSAI), in furtherance of which great project and implementation of AI started from agricultural to education sector. The present paper has discussed need of responsible AI to utilize the most potential of AI. The research has identified few factors restricting growth of AI, that includes lack of basic understanding over concept of AI to market players and general mass, privacy and security risk. The paper has further identified basics for making a responsible AI, principle including- accountability, transparency, equality, security, privacy and protecting human ethical values.

**Responsible AI for the Indian Justice System – A strategy paper**<sup>6</sup>, in the report the main focus has been given over potential use of AI in legal system are administrative efficiency and augmented decision making process following set of ethical conducts. The research further displays the global usage of AI in criminal justice system in USA, UK and Brazil.

## JOURNAL ARTICLES

**Andrew C. Michaels**<sup>7</sup>, the paper has potentially described AI, yet limiting it to few restrictions. The Author has discarded the view of Eugene Volokh, an American legal Scholar, who proposed that AI can persuasive judgement in a decision making, thereby substantially eliminating human judge. This present paper has identified core principles of AI, but simultaneously made human supreme because a judgement is based on law in context, which is collectively made in case by parties, advocates and judges drawn over experience, intuition and legal principles, where AI has capacity to read out black letter law only.

**Cass R. Sunstein**<sup>8</sup>, in this paper, author has explained scope of AI in legal reasoning. Where two assumptions have been drawn whether AI has strong or weak role in legal reasoning. And favoured the weak role by stating that AI can be brought in domain of legal reasoning like an upgrade version of LEXIS & Westlaw, where AI would enhance the performance of software that can distinguish the principles of cases with similar facts.

**Li Ma**<sup>9</sup>, in the paper has explored the advantages of implicating AI in legal research and education. The Paper explains that when researcher collects big data for research under process, job and for preparing argument, employing AI for all these tasks can convert big data to relevant data and if AI will be implicated in studies while learning legal reasoning, problem solving and applying logics of law it may ease the learning and promote efficient outcomes.

<sup>5</sup> The Need for Responsible AI, NITI Aayog, Available at: <https://www.niti.gov.in/sites/default/files/2021-02/Responsible-AI-22022021.pdf>.

<sup>6</sup> Ameen Jauhar, Vaidehi Misra et al., Responsible AI for the Indian Justice System – A strategy paper, Vidhi Centre for Legal Policy, Available at: <https://vidhilegalpolicy.in/research/responsible-ai-for-the-indian-justice-system-a-strategy-paper/>.

<sup>7</sup> *Artificial Intelligence, Legal Change, and Separation of Powers*, 88 U. CIN. L. REV. 1083, 1083-1084 (2020).

<sup>8</sup> *Of Artificial Intelligence and Legal Reasoning*, 8 U. CHI. L. Sch. ROUNDTABLE 29, 29-31 (2001).

<sup>9</sup> *Artificial Intelligence in Legal Education under the Background of Big Data Computation, International Conference on Computation, Big-Data and Engineering (ICCBDE) 51, 51-53 (2022)*, Available at:

[https://www.researchgate.net/publication/363683401\\_Artificial\\_Intelligence\\_in\\_Legal\\_Education\\_under\\_the\\_Background\\_of\\_Big\\_Data\\_Computation](https://www.researchgate.net/publication/363683401_Artificial_Intelligence_in_Legal_Education_under_the_Background_of_Big_Data_Computation)

**Tim Wu**<sup>10</sup>, the paper has emphasized over meritorious capabilities of AI, and its ability to fasten criminal justice system, by engaging AI in decision making loop, AI can act without bias and on logical facts rather going emotional. The hypothesis of paper is “Leaving scope of AI in future for decision making will add trouble to pendency”. Referring the automation of Routine filing and hearing as a good model.

## FOREIGN CASES

### US CASE

**State v. Loomis**<sup>11</sup>, in this case **Mr. Loomie**, a US Citizen was charged with car driving in a drive-by shooting, receiving stolen goods and escaping the arrest unlawfully. The trial court used the COMPAS risk assessment (the predictive assessment tool) and given custodial sentence. on appeal the supreme court of Wisconsin upheld the use of predictive justice tool of machine learning and further added the pre requisite of caution by court before employing these tools.

### INDIAN CASES

**Hussainara Khatoun & Ors vs Home Secretary, State Of Bihar**<sup>12</sup>- the apex court has identified right to fair trial inherited under Article 21, giving trial procedure a fundamental position in the Country, to protect the carriage of Justice.

**Imtiyaz Ahmad v. State of Uttar Pradesh and Ors.**<sup>13</sup>, in this case the Supreme Court recorded that delay in justice abridges Article 21 by violating principles of Fair justice. The court further asked the Law commission to submit its recommendation to deal with delayed justice.

**Parkash Singh vs Union of India**<sup>14</sup>, the apex court gave suggestions on reforms in criminal justice system, specifically in police system including State Security commission to watch working of police and police complaint authorities in each district of states.

## 1.3 RESEARCH QUESTIONS

1. Introduction AI will aid and improve Criminal justice delivery in India?
2. What are the features of AI relevant to problems associated with Criminal justice delivery mechanism in India?

## 1.4 HYPOTHESIS

- The introduction of Artificial Intelligence technology will be beneficial for Criminal justice system in India. It will fasten the pace of case disposal, deter and discover crime, improving research quality and will bring transparency.

## 1.5 RESEARCH METHODOLOGY

The nature of the research is doctrinal. It is explanatory and evaluative primarily relying on secondary data and uses the doctrinal method of research. The methodology adopted for the research endeavours to utilize

<sup>10</sup> WILL ARTIFICIAL INTELLIGENCE EAT THE LAW? THE RISE OF HYBRID SOCIAL-ORDERING SYSTEMS, 119(7) *Columbia Law Review* 2001, 2001–2002 (2019), *JSTOR*, Available at: <https://www.jstor.org/stable/26810857>.

<sup>11</sup> <https://harvardlawreview.org/2017/03/state-v-loomis/>

<sup>12</sup> 1979 AIR 1369, 1979 SCR (3) 532

<sup>13</sup> AIR SC 2012 642

<sup>14</sup> (2006) 8 SCC.

the available information which is limited, optimally to cover the vast exposure of AI, across few operations and process of Justice delivery system in India. Data has been collected from: -

- Primary sources: - Justice Malimath<sup>15</sup> Committee on Reforms of Criminal Justice System, Report of AI Committee constituted by Supreme Court “Expression of Interest for developing ARTIFICIAL INTELLIGENCE SOLUTION for automation of scrutiny of cases in Supreme Court of India”<sup>16</sup>, report of committee – d on cyber security, legal and ethical issues<sup>17</sup> and the NITI Aayog report “Responsible AI”<sup>18</sup>, domestic and foreign cases and legislations.
- Secondary sources: - books, journals, research papers, papers, articles, websites, newspaper, reports, etc.

## 1.6 RESEARCH DESIGN

The research paper has analytical descriptive research design, followed by a thorough evaluative cum comparative analysis because the problem of research is to study the legal implications of Artificial Intelligence Technology by its infusion in criminal Justice system in India. The Researcher has written and presented this work for Researchers, Law Students and to some extent for Central and State government Committees working over introducing AI in legal regime, to provide the understanding of this Inter-disciplinary topic.

## CHAPTER 2

### 2.1 INTRODUCING AI IN INDIAN CRIMINAL JUSTICE SYSTEM

The criminal justice system in India is suffering with delayed justice, pendency of cases, frequent unnecessary adjournments, lack and inadequate legal assistance, corrupt practices, vacant judicial offices, poor ratio of judges to people, numeral undertrials, poor maintenance of record, complexity of legal procedure as well as language and accountability. India has highest population in the world, yet it does not have human capital. Justice Dipankar Datta in his report on Human Resource Development Strategy<sup>19</sup>, has aptly marked that Indian judiciary is lacking skilled human resources, which is leading vacant offices of judicial officers and thus adding delay to justice.

National Judicial Data Grid (NJDG), around 3.81 crore cases are pending in various district and taluka courts in India and more than one lakh cases have been pending for more than 30 years<sup>20</sup>. Delay of criminal justice procedure considerably owe to the vacant judicial offices and incompetent human resource. The Judicial recruitment in subordinate courts is conducted by the State government after consultation with the High Court of Concerned State. Therefore, the procedure and timeline vary from state to state. sometimes the recruitment authorities do not find required number of persons as per the vacancies available, which further leads to

<sup>15</sup> Dr. Justice V.S. Malimath Formerly, Chief Justice of Karnataka and Kerala High Courts Chairman, Central Administrative Tribunal Member, National Human Rights Commission

<sup>16</sup> [https://main.sci.gov.in/pdf/TN/24122020\\_044510.pdf](https://main.sci.gov.in/pdf/TN/24122020_044510.pdf)

<sup>17</sup> Ministry of Electronics and IT, Government of India (MeitY), Available at:

[https://www.meity.gov.in/writereaddata/files/Committees\\_D-Cyber-n-Legal-and-Ethical.pdf](https://www.meity.gov.in/writereaddata/files/Committees_D-Cyber-n-Legal-and-Ethical.pdf).

<sup>18</sup> <https://www.niti.gov.in/sites/default/files/2021-02/Responsible-AI-22022021.pdf>

<sup>19</sup> Report of the Sub-Committee Headed by Justice Dipankar Datta on ‘Human Resource Development Strategy’, Available at: <https://main.sci.gov.in/pdf/NCMS/Human%20Resource%20Development%20Strategy.pdf>.

<sup>20</sup> <https://doj.gov.in/the-national-judicial-data-grid-njdg/>.

existing vacancies backlog, at time competent persons struggles with long irregular recruitment process, and when appointed serves justice but this pace is too slow to match the existing vacancies that can really add speed to the justice mechanism. Thereby, the judges to people ratio in India is inappropriate. Also, the vacancies and incompetency of judicial officer leads to frequent inexplicable adjournments, increment in number of undertrials.

**All India Judges Association Vs Union of India**<sup>21</sup>, here in this case the Supreme Court was of the view that the 13 judges per million population ratio is an indication of slow and burdened judiciary. This ratio to be increased to 50 per million people within five years within phases determined by law and justice.<sup>22</sup>

**Imtiyaz Ahmed Vs State of Uttar Pradesh**<sup>23</sup>, in this case, the learned Supreme Court opined that the criminal justice system is suffering with multi-stage delays where Average pendency per case works out to be around 7.4 years. Where in 32% of cases owes to the delay in filing Charge-sheet. In 19% of the cases the delay is occurred at next two prominent stages are found to be appearance and summons.

Due to delayed justice procedures, the India is continuously witnessing the rise in crime rate beyond all the socio-economic development. Recently, the NCRB has submitted its report of year 2021 in August 2022, it displayed rise of particular offenses. They are listed below:

#### Annual report of major crime increment in the year 2022<sup>24</sup>

Increase in % Crime rate	Offense categorization
56.5	crime against women
16.2	crime against children
5.3	Crime against senior citizen
1.2	Crime Against Schedule Castes
6.4	Crime Against Schedule Tribes
0.3	Murder
7.17	Suicide
111	Cyber crimes
20	kidnapping
18.5	Crime against property
4.4	Environmental crime
12.35	Economic offenses

<sup>21</sup> AIR 2002 SC 1752.

<sup>22</sup> [https://main.sci.gov.in/supremecourt/2015/23229/23229\\_2015\\_1\\_32\\_21033\\_Order\\_28-Feb-2020.pdf](https://main.sci.gov.in/supremecourt/2015/23229/23229_2015_1_32_21033_Order_28-Feb-2020.pdf).

<sup>23</sup> Criminal Appeal Nos. 254-262 of 2012.

<sup>24</sup> <https://ncrb.gov.in/en/Crime-in-India-2021>.

So, an analysis of present situation based on data of NJDG, caselaw, Law commission report, NCRB report and other relevant literature. The researcher lists the major problems connected with the criminal justice system in India which are arranged below:

- a) Delay and denial of FIR lodging.
- b) Manipulations in FIR/ police report under political and monitory interference.
- c) Commitment of case to the incompetent judge.
- d) Frequent adjournment.
- e) Long dates due to vacancy in judicial offices.
- f) Improper custody of judicial record.
- g) Improper analysis of voluminous judicial and evidential record.
- h) Irregular recruitment in subordinate judiciary.
- i) No accountability for slow disposal of cases.
- j) No mechanism to detect the stage of delay.
- k) Insufficient condemnation of delay
- l) Improper judge to people ratio.
- m) Lack of legal assistance.
- n) Rigidity of legal procedure.
- o) Absence of transparency and reachability of judgement.
- p) Lack of efficiency in crime preventive measures.

AI is an intelligence designed by humans and demonstrated by machines. The idea of AI into law was first emerged from the International Conference on AI and Law (ICAAIL) which was first held in Boston in 1987. Later, the International Association for AI and Law was formulated in the year 1991, followed by the launch of Journal of AI and Law in the year 1992. This rooted the milestone of inter-relationship between AI and Law. Thereafter, with the complete development and achievement of AI in the technological sector, other disciplines including legal started looking for benefit extraction.

The use of artificial intelligence towards criminal justice can present numerous benefits like, AI can record performance on rule-based tasks, such as searching documents electronically, with greater accuracy than humans. it is an indictive merit in terms of reducing the workload in promoting efficiency in the criminal justice system. Another key benefit of AI for access to justice is the cost of the decision-making process for parties seeking clarification. However, before employing AI in criminal justice system in India, a responsible management needs to be created having proper regulations and principle flowing from Constitutional Scheme.

These principles are deduced as follows:

- a) Principle of Safety and Reliability
- b) Principle of Equality
- c) Principle of Inclusivity and Non-discrimination
- d) Principle of Privacy and security
- e) Principle of Transparency
- f) Principle of Accountability



g) Principle of protection and reinforcement of positive human values<sup>25</sup>

## 2.2 FACILITATOR FOR INTRODUCING AI IN THE CRIMINAL JUSTICE SYSTEM

**E-court project:** The e-Courts Project under the "National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary - 2005"<sup>26</sup>. It's a part of e-governance initiative submitted by the e-Committee of the Supreme Court of India served as the foundation for the creation of the e-Court Project, which had the goal of transforming the Indian Judiciary by enabling courts with basic infrastructure and ICT to bring the Indian judiciary at par with global developments. the e-court Project has facilitated keen essential requirement of modern justice delivery. Some of its essential launch which will facilitate infusion of AI in criminal justice system are as follows:

1. **Digitalization:** It was carried out in two phases first in 2007 and second in 2015, under the first phase the basic development was endorsed by providing adequate infrastructure and basic computerization in all district court including of hardware, LAN and Case Information Software (CIS), for facilitating basic case related services to the litigants and the lawyers. In the second phase, upper level development was carried out by providing modern computerization including additional supply of hardware and computerization of District Legal Services Authority, Legal Services Committee, the National Judicial Academy and the State Judicial Academies for effective modules of services and training.<sup>27</sup> Computerization is the fundamental requisite for employing AI in judiciary. Also, the primary computerization and digitalization has trained and prepared Judicial officers and other stakeholders for advance and progressive technology usage.
2. **Crime and Criminal Tracking Network and Systems (CCTNS):** Currently being implemented by NCRB as a Mission Mode Project under the National e-Governance Plan (NeGP) of the Government of India<sup>28</sup>. CCTNS aims to create an integrated system for improving the effectiveness of policing. It enhanced search capabilities and provided the centralized crime and criminal information repository containing the criminal pictures, and fingerprints. Thus, improved capacity to assess crime trends or methods of operation.<sup>29</sup>
3. **Inter-operable Criminal Justice System (ICJS):** it was implemented by Ministry of Home Affairs (MHA) having enforcement by NCRB and NIC, to facilitate transparency and connectivity in criminal justice system<sup>30</sup>. Using a single platform, the Inter-operable Criminal Justice System provides seamless data and information exchange between the many components of the criminal justice system,

<sup>25</sup> Report of Artificial Intelligence Committee of Supreme court over invitation criteria to firm for developing suitable AI for court, *Developing Artificial Intelligence Solution for automation of scrutiny of cases in the Supreme Court of India*, Available at: [https://main.sci.gov.in/pdf/TN/24122020\\_044510.pdf](https://main.sci.gov.in/pdf/TN/24122020_044510.pdf).

<sup>26</sup>

<https://www.nic.in/products/ecourts/#:~:text=The%20eCourts%20Project%20was%20conceptualized,by%20ICT%20enablement%20of%20Courts.>

<sup>27</sup> E-Committee of Supreme Court of India, Available at: <https://ecommitteesci.gov.in/project/brief-overview-of-e-courts-project/>.

<sup>28</sup> [https://ncrb.gov.in/en/crime-and-criminal-tracking-network-systems-cctns#:~:text=Crime%20and%20Criminal%20Tracking%20Network%20%26%20Systems%20\(CCTNS\)%20is%20a,Integrated%20Police%20Application%20\(CIPA\).](https://ncrb.gov.in/en/crime-and-criminal-tracking-network-systems-cctns#:~:text=Crime%20and%20Criminal%20Tracking%20Network%20%26%20Systems%20(CCTNS)%20is%20a,Integrated%20Police%20Application%20(CIPA).)

<sup>29</sup> NCRB Crime and Criminal Tracking Network and Systems, <https://ncrb.gov.in/en/crime-and-criminal-tracking-network-systems-cctns>.

<sup>30</sup> <https://districts.ecourts.gov.in/icjs-inter-operable-criminal-justice-system#:~:text=The%20Inter%20operable%20Criminal%20Justice,like%20courts%2C%20police%2C%20jails%20and.>

including courts, police, jails, and forensic science labs. Courts have been given access to the FIR, case diary, and charge sheet through the ICJS platform. Individual IT systems were set up and stabilized throughout Phase I of the project, and record searches were made possible on these platforms. Now, the Phase-II is started in 2023, on the theme of 'one data, one entry' principle, here the data to be entered only once in one pillar and is then accessible in all other pillars without the need for additional data entry in each pillar by combining CCTNs with e-Courts, e-Prisons, Forensic Labs, Fingerprints and Prosecution.<sup>31</sup>

### 2.3 RELEVANT FEATURES OF AI PERTAINING TO CRIMINAL JUSTICE SYSTEM

Artificial Intelligence is the machine capable mechanism where self-learning is processed by Software that carefully observe the data analyse it and produce some results that shows the trend of data and attach some meaning to it. As discussed earlier the Criminal justice system is witnessing huge influx in crime rate due to various loopholes and delayed justice of the system. AI being capable to aid, shall be helpful in preventing few of such crimes by following features-

- 1. Data mining:** Lex Machina a 2006 data mining computer program created at Stanford University, looked at the ways to help in the prediction of the case progress in the US. Additionally, Cambridge University's project named 'Cruncher Alpha' an AI system prophesized with 86.6% accuracy the outcome of 775 financial ombudsman cases. Whereas, a panel of 100 attorney of experience assembled to perform the same task where they achieved 66.3% accuracy. So, AI can be used by concerned enforcement agencies to extract relevant accurate information of offence, offender and other particular of crimes. For eg., It can detect related party transactions, compliance of different laws applicable to any transactions, manipulations of online record etc.
- 2. Policing big data:** AI can level up the efficiency with insight. therefore, it can contribute to the police work. AI fulfils the task better than police officers. Use of AI in policing also includes study of CCTV recording, where Video Monitoring software reduces time of Surveillance by automating detector mode, where only crucial incidents have been given attention. For example- AI can detect money laundering, misappropriation of assets, preparation to commit offence, cheating etc.
- 3. Predicting time, place and to an extend conduct of crime by data analysis-** using AI for studying historical behaviour of suspects, identify connections and patterns behind occurrence of any specific crime, recognized areas specific to some particular crimes and preparing report of predictive crime, suggesting the need of preventing measures. It observes pattern of data, take account of repeated offenders, specific circumstances, other aggravating situation and can prepare a final report under set of algorithm taking all important consideration behind each particular corporate crime. For eg. If a particular set of input is given on AI for each distinct offense, and the crime being the robbery, the AI can take note in which area there is a sudden rise on robbery, what was the common type, pattern of committing, involvement of any habitual offenders etc., based on these it can assert certain predictions.

<sup>31</sup> <https://districts.ecourts.gov.in/icjs-inter-operable-criminal-justice-system#:~:text=The%20Inter%20operable%20Criminal%20Justice,like%20courts%2C%20police%2C%20jails%20and.>

4. **Caution alert-** as AI has ability to predict to an extent, this further generate caution alert where and when needed. So, enforcement and control mechanism of corporate crime can employ AI which will predict the crime as well as will raise caution alert to enable preparations for prevention.  
the Royal Bank of Scotland has used AI to prevent losses of over \$9 million to customers after conducting a year-long pilot with Vocalink Analytics, a payments business, to use AI to scan small business transactions for fake invoices<sup>32</sup>. The banking industry and major financial corporation are looking at AI to generate suspicion alert against scam and frauds.
5. **Relating different transactions done with ulterior motive-** few transactions appear different on the face than on reality. At times companies and people acts and behaves differently to cover some prohibited acts and transactions. For eg.- escaping intention and motives behind the veil of culpable homicide from the gravity of murder. These acts are done with so much of efforts, that the ulterior motive and act is layered with legal acts. It becomes tough for humans to discover layers to reach the core transaction, whereas AI being expert at data mining can get to the ulterior act and can give loud message that “what you cannot do directly, you cannot do indirectly as well”.  
The best example to is **Huawei- Sky com case**, where the Huawei violated US laws on sanction with Iran, where the company was operating in Iran under the banner of Skycom Company, and pretended that Skycom is just a local trading partner and it has sold it in 2007 prior to sanctions, and continued operating and transacting financially through international banks till it was finally caught in 2017 by Office of Foreign Assets Control.
6. **Mandating all records of crime on AI platforms maintained by Regulatory agencies-** the enforcement and control agency can utilize the merit of voluminous and huge storage of AI to bring the transparency by mandating submission of quarter reporting system where all corporation shall upload audit reports of account, prospectus, annual governance report. It shall easily provide database to AI for analysis, reporting predictions, detecting frauds and preventing scams.

## CHAPTER 3

### 3.1 ROLE OF AI

The AI can have two facilitation mechanism under the panorama of criminal justice system where on one parlance it can address delay in justice and removing absurdities from path of justice and on other parlance it can prevent crime to serve predictive justice. However, this employment of AI in criminal justice system needs to be regulated by human supervision to have accurate results and achievement of goals of employment.

#### 3.1.1 AS A CARRIAGE OF JUSTICE

Artificial intelligence can act as an effective reform proposal for criminal justice system, where it asks for pre-requisite digitalization of record and data filing along with progressive technical approach. AI can aid the criminal justice mechanism in the following way:

<sup>32</sup> Lisa Quest, Anthony Charrie, Lucas du Croo de Jongh, and Subas Roy, The Risks and Benefits of Using AI to Detect Crime, Harvard Business Review, available at: <https://hbr.org/2018/08/the-risks-and-benefits-of-using-ai-to-detect-crime>.

- a) **AI to assist in courts:** AI can be used in assistance capacity in court, where all the data coming from e-filing or manually entered of the cases, shall be inserted as an input, where the command can be given to prepare brief of relevant facts, points of law, related precedents and global comparison. This will save lot of time and human labour to prepare and analyse the case in wholesome way.
- b) **Analogous hearing:** the AI can classify the cases under different cluster based on similarities and dissimilarities. Thus, arrange their hearing order to promote systematic arrangement of hearing. Cases that are same, similar, related, or have a common legal issue to be identified for tagging or clubbing, as appropriate, so that they may be heard together in an analogous way for faster case disposition as the hearing of the similar cases in sequence provides ease to generalise the referred data. To identify these same, comparable, related cases or the cases having common legal questions, a machine learning module can be prepared<sup>33</sup>. For example, murder cases shall be heard in the series, theft in another series.
- c) **Document evaluation:** AI can be used in document analysis due to its ability of data mining and interpretation. It can conclude the possible outcomes of facts based on logical deductions. It can compare and distinguish among documents. So, AI is helpful where the voluminous record is submitted during the case proceeding in view of evidence or otherwise for verification, analysis or comparison. In cases where parties are asked to replace previously submitted papers or the Court order revision, amendment in documents already submitted so there, AI can also be used to carry out comparison matrix to identify any modifications made to the document that is already on file.
- d) **live transcription:** AI can be used to automate transcription of order, judgement or direction of the court due to its ability of speech recognition and translating speech into text and vice versa. The Constitutional bench of Supreme Court has used this in the case *Nabam Rebia vs Deputy Speaker*<sup>34</sup>. This can be employed throughout all hierarchy of courts to made judgement available in the quick real time.
- e) **Using AI to minimize inexplicable adjournments:** as the quick case briefs, document evaluation, upload can be facilitated by creating AI portals, the court can proceed with substantial matters in hearing and can eliminate inexplicable adjournments which are granted for document revision, submission, verification.
- f) **AI powered legal assistance:** as the criminal justice system lacks in securing sufficient availability of legal aid. AI can be used by the legal aid authority, to provide virtually preliminary legal aid. the relevant data will be inserted based on the previous data and recorded professional advices, which will be observed and processed by AI using machine learning, deep learning and ANNs.
- g) **Data grid for simplified monitoring:** As there exist National Judicial Data Grid (NJDG), a database of orders, judgments and case details of 18,735 District & Subordinate Courts and High Courts created as an online platform under the e-Courts Project<sup>35</sup>. Similarly, a central data grid can be setup which

<sup>33</sup> REPORT OF COMMITTEE – D ON CYBER SECURITY, LEGAL AND ETHICAL ISSUES, Ministry of Electronics and IT, Government of India (MeitY), Available at: [https://www.meity.gov.in/writereaddata/files/Committees\\_D-Cyber-n-Legal-and-Ethical.pdf](https://www.meity.gov.in/writereaddata/files/Committees_D-Cyber-n-Legal-and-Ethical.pdf).

<sup>34</sup> (2017) 13 SCC 332.

<sup>35</sup> The National Judicial Data Grid (NJDG), Department of justice, Available at: <https://doj.gov.in/the-national-judicial-data-grid-njdg/>.

shall trace the evolving and changing principles, changed prepositions of law and precedents. This can be facilitated by AI which can collect and classify this data under distinct heads based on subject matter whether it is civil, criminal, arbitration, human rights, trade or commercial. All the legal stakeholder shall be given access to this to promote an informative legal fraternity.

Also, AI facilitated data grid can be setup to trace progress of cases and detect the stage of delay for creating an accountable environment where AI can be used to automate monitoring of stages where delay is occurring, to run the risk assessment and record analysis. For example, SC created an AI portal LIMBS discussed in para 4.7.3, which collects and classify government litigation as pending, disposed or dismissed.

- h) **Translation of judgement into regional languages:** judicial documents specifically the judgement contains legal terminology, which at times is out of reach of the convicts and also the claimants. An AI tool has ability of natural language processing and observation which can translate the judgement into various regional languages and vice-versa. This will increase the reachability of justice as well as knowledge of litigants. The SUVAS an AI portal of SC discussed in para 4.7.2 is an example of it. This can further be extended at all hierarchy of cases.
- i) **Transparency and accountability at all level of judiciary:** as everything will be supervised firstly by machine and secondly by human, this will create double check and balance without scope of human bias behaviour, this will lead to transparent justice system which is inclusive of all legal stakeholder. This will facilitate speedy judicial mechanism as delay and authority responsible will not go unnoticed rather will be accounted and condemned.
- j) **Protecting interest of undertrials:** as there is no attention given to the data of undertrials, which constitutes the largest occupancy in prisons, they are suffering before conclusion of their guilt. This is against the basic presumption of criminal justice system in India- innocent until proven guilty. if the case records of undertrials will be uploaded on AI portal created for the purpose, it can predict and suggest the measure to balance the individual liberty against societal interest based on the mitigating and aggravating factors of undertrial and the alleged crime against him.
- k) **Sentencing:** as stated that AI can predict possible measures to deal with convicts based on his historical data, age, gender, dependants, crime alleged and gravity of crime. Thus, can recommend appropriate choices of sentence to be passed based on logical deductions which shall promote rehabilitation of offender as well as safeguard the societal interest. AI is already being used for sentencing in jurisdiction of USA by COMPAS and in UK by HART.

### 3.1.2 AS A CRIME PREVENTIVE MECHANISM

AI has wide scope in prevention and prediction of crime due to its intelligence based predictions. But who will regulate and administer this prevention? The Police? Which is already overburdened with investigation and law & order!

To have an effective mechanism by AI, its important to have an independent authority, so, the proposal of employing AI in the preventive mechanism require an establishment of independent agency having defined powers and authority. AI can aid the preventive mechanism in the following way:

- a) **AI portal for FIR:** it is often found that FIR is manipulated under political or monetary consideration. FIR is the foundational document of any crime, which should be guarded against any manipulation and corrections.
- b) **Surveillance for preventing crime-** Surveillance is to watch over any person, group or any organization for a particular purpose. Now, this purpose is of wide import from preventing a crime, to reach to criminals, to assess information of crime design, to secure interest of state etc., There are two major ways of monitoring. Firstly, Physical Surveillance, where human assets are involved to observe the suspicious person vigilantly. Second, is technical Surveillance where technological applications have been used to monitor, example of it include CCTV Camera installation, Software, Phone Tapping. AI guided **Surveillance** is the aspect of technological advancement where intelligent machines do analysis of records. Here, the machines possess self-learning Capabilities to tract the direction of data record by CCTV, Software or audios.
- c) **For crime details:** an AI portal should be created at state level, where all the states data to be compiled and connected including all the essential of each particular recorded crime including type of offense recorded, offense details, investigation report on daily basis, details of accused, if arrested then place of custody, details of arresting and investigating officer, whether given bail or not along with reason. On the collected data then AI has ability to run logical deduction and pattern recognition process to evaluate and classify the similar cases where bail is given and cases where not, steps taken by police, prominent manner of committing specific crime and frequent reasons behind the crime.
- d) **Case progress:** An AI facilitated data grid to trace progress of cases and detect the stage of delay for creating an accountable environment where AI can be used to automate monitoring of stages where delay is occurring, to run the risk assessment and record analysis. Each progression including the police report, commitment of case, commencement of trial, reasons for adjournments, brief of testimony and evidences to be filed with AI.
- e) **Crime prediction:** AI can be used to monitor, to run the risk assessment, record analysis and logical predictions over the data collected under Inter-operable Criminal Justice system, NCRB data and the data reported under surveillance of a particular cases, that enables the formation of record maintenance system that can be used to predict future possibility of crime by particular accused; sensitive areas for a species of crime, for example Delhi witnessed highest number of crime against women among any metropolitan area in 2021, so based on this fact along with tracing daily number of cases registered of crime against women in Delhi, AI can predict any specific area in Delhi after analysing all the past events as well as present trends; AI can predict the specific timing of any particular crime; as evidentiary value and provides history to the case.
- f) **Apprehension of accused and convicts:** AI has ability of speech and facial recognition which will facilitate easy and quick apprehension of accused/convict/escaped offenders and thus reducing concealment by such persons under false personality pertinence. For example, Punjab and Rajasthan Police is using ABHED- AI Based Human Efface Detection.
- g) **Crime control:** AI backed Surveillance system, evaluation of data on AI portals related to criminal justice system, has potential to deter crime. It can be designed towards prevention of offenses, where

the authorized agency can endorse AI to oversight suspicious person and activities, report all incidences and built an inference of proposed crime design and finally seize all criminal, abettors, and all arms of that. For example- Odisha Police is using TRINETRA, an AI based tool to analyse the crime data for effective control.

- h) Preventive measures:** As it contains predictive tools based on the analysis of pertinent propositions, AI can assist Police or other Surveillance agencies in monitoring any data, activity, or omission that can hurt individuals or have a negative impact on them. The concerned preventative agency can benefit from AI mechanisms to detect any distorted activity or any data that could encourage riots, violence, public annoyance, or similar unlawful acts, and agency can respond promptly in a precautionary manner to protect people's property and lives. the biggest and recent example is internet shutdown during abrogation of Article 370 in Kashmir where government suspended internet as it was apprehended that online communication can foster riots and violence, though Supreme Court in Anuradha Bhasin's Case<sup>36</sup> held that indefinite suspension of Internet violated article 19(1)a but it upheld definite suspension in interest of State.
- i) Caution alerts:** as AI has ability to predict to an extent, this further generate caution alert where and when needed as to warn against suspicion. So, enforcement and control mechanism of crimes can employ AI which will predict the crime as well as will raise caution alert to enable preparations for prevention.

### 3.2 MERITS OF INTRODUCING AI

- a) Expeditious work:** Traditional methods of detecting and preventing corporate crime involved a lengthy process that included round-the-clock surveillance, minute-by-minute recording, and continuous analysis of data to reach a conclusion. AI, however, enables automation of events by teaching machines the purpose of surveillance and instructing them to focus only on activities related to that purpose. For instance, in bribery surveillance, the AI will catch persons giving or receiving gifts, cash, or other valuables by tracking banking activities, tracking asset transfers between the suspects and their relatives, and using Video Content Analytical Tools.
- b) Relevant extract with higher level of accuracy:** The report has a higher chance of accuracy when AI performs data analytics or mining because there is less chance of human error and technical computations are based on intelligent objective input. With the advent of AI, all of this has been reduced to machine learning, where a smart Algorithm will take input of data and will give a reported output suitable to purpose. Previously, data analysis from scratch required enormous efforts to read the data, monitor videos, analyse sound, and prepare a final report of key findings.
- c) Predictions facilitating prevention:** After analysing all relevant information on the specific crime, including requirements to confirm the crime, the antecedent of the crime and suspects, often and repeated circumstances, and aggravating tools, AI with accurate data analytics and the ability to conduct behavioural studies creates the final report. Such a report has a stronger predictive value,

<sup>36</sup> Anuradha Bhasin V. Union of India AIR 2020 SC 1308.

which gives legal authorities more leeway to identify suspicious activity, identify all preventive measures, make them available, and ultimately stop the crime from happening.

- d) **Easy surveillance:** Traditionally, human resources are used to keep a close eye on the questionable person. Modern technology has made technical surveillance possible. Examples include the installation of CCTV cameras, software, phone tapping, and artificial intelligence. Surveillance, a component of technological growth where intelligent robots analyse data, is made easier by artificial intelligence. Here, the machines have the ability to learn on their own how to track the direction of data collected by CCTV, software, or audios and can relate recorded data based on a set of algorithms that can reflect desired results.
- e) **Lower scope of manmade errors:** human may make omission in doing supervision or any error in custody of records, analysis of record but AI works on set of algorithms and Machine learning Software that assures error free work. Loyalty problem also has been reduced where in earlier scenario officials doing surveillance or having custody of record, were having a chance to breach their service for personal benefits, now in AI all such problems have been reduced.
- f) **Efficient work at lower costs:** reducing the number of human intermediaries from the process of detecting and preventing crime by analysing antecedent of suspects, offense will reduce the cost. Also, it provides easy data preparation for observation under automation and supervised model.
- g) **Storage effective-** AI provides voluminous storage in comparison to other software available of specific category. it provides indefinite and cheap storage of data and facilitates the easy access to record throughout any time without irregular stipulations. There is no human custodian to trouble the access. Also, there is no need of physical place of record in AI.
- h) **Unbiased decisions-** AI having objectivity input under computed algorithm shall not act partial towards any gender, race, religion, place, class etc., which will ensure unbiased and true to facts report drawn after an objective induced review.

### 3.3 DEMERITS OF INTRODUCING AI

- a) **Lesser intelligence:** Homo sapiens- a man who knows, humans are known for their Cognitive skills and excellence intelligence. However, a machine intelligence like AI, a technology filled with capabilities of machine learning and problem solving, having sufficient skills in operation. It is still risky to be a substitution of a human. Artificial Intelligence has made a distinctive identity out of all technological developments due to its cognitive skills of rationality, where such software has been designed having capabilities of problem solving and self-learning aptitude, but this does not equalize its potential to human intelligence, a machine working with some rationality can aid human but can never replace human. Human intelligence is an essential factor for controlling any machine because at last human has made that AI, it is not self-made by machines. So, suggestively it is better to include AI to assist human. by reducing few intermediary human but considerable human assets are required to look over the functioning to improve the lacunae created by AI working where more rationality was required.



- b) **Qualitative challenges:** employing AI in prediction, detection and preventing mechanism by concerned enforcement agency may diminish quality of work and making some gross mistakes. the Artificial Intelligence has been designed in a predictive outcome logistics. where a specified input is designed to achieve particular predictive result. But AI is not able to deal with totally new and strange situations due to absence of Human rationality. Any unpredictable outcome is unwelcomed in AI. The recent example is inability of Self-driven cars of tesla to deal with the dog on the road.
- c) **Higher cost of deployment and maintenance:** AI is the costly affair being the advanced technological invention. The intermediate cost is very high. To employ persons/technology, all seeks heavy expenditure because at one part employing agency involves cost, then to buy a storage for recording data is required and finally some mechanism to analyse data, all implicates expenditures on the state. The better the AI, the higher the cost will be. So, the initial cost of AI is considerably high for analysis of comparatively small data, whereas for voluminous data the cost of AI can be mitigated against need of human labour.
- d) **Reducing employment opportunities:** Artificial Intelligence software works with machines and the technologies, it involves least human interference that reduces employment and thus saves cost. Thus, introducing AI may diminish requirement of human factor from enforcement mechanism system. It threatens to increase unemployment rate in a Country with excessive human capital. Also, So, employing AI in legal system may affect earning human assets sloping down.
- e) **Ethical issues:** Artificial intelligence is basically an advanced software where a machine is acting over the stipulated algorithms, that is doing technical computation of data and releasing result accordingly, it doesn't involve any emotional and ethical aspect. It doesn't distinguish between sensitive or personal data that may lead to breach of individual privacy and liberty. For example, CCTV recording may capture some personal moment or confidential data of an individual that a human will never report in final documents but AI software may bring forward that.
- f) **Cyber threats:** AI has technological limitation, it is under threat of manipulation, theft or sabotage either by agency or unlawful access due to the fault of agency. This data theft/manipulation can lead to commitment of crime, blackmailing or defamation. the record of AI powered data analysis of a particular case is essential for confidentiality of the person as well as corporation, but in sensitive cases few records hold confidential data of the state where the corporation is engaged with security or defence business or any business wherein state is interested, and any fault over the part of Surveillance agency, custodian agency may adversely affect interest and security of state. So, it is one of the drawback of keeping records that strict protection mechanism is always required.
- g) **Privacy concern:** Surveillance via AI for preventing and detecting crime how good for the state is always a threat to individual's liberty and Privacy. As the basic function of data analysis and mining involves the monitoring or observing the activity/data of person suspected, but that suspicion along with observation kills the privacy of individual who is innocent and unknown of his observation. Right

to Privacy is the Fundamental right under Article 21 of Constitution of India as announced by the Apex Court in K.S Puttaswamy case<sup>37</sup>.

## CHAPTER 4

### 4.1 APPLICATIONS OF AI IN INDIAN CRIMINAL JUSTICE SYSTEM

Digitalization flourished in India during covid, where everything went online.

Supreme Court of India announced incorporating advance technology of AI and ML. it was inspired by modernisation the Indian judiciary by empowering the courts with ICT (Information and Communication Technology). It is a pan-India Initiative, managed and supported by the Department of Justice, Ministry of Law and Justice. The supreme court formed a AI committee for launching three AI portals which are as follows: SUPACE, SUVAS and LIMBS.

#### 4.1.1 SUPACE

SUPACE stands for Supreme Court Portal for Assistance in Court's Efficiency. it is an AI enabled mechanism that collects important data, relevant facts, suitable precedent and legislation. It prepares report of all appropriate substance over the case listed and make them available to a court as a preparatory report. It is not designed to take choices, but rather to process data and to make them available to judges searching for an input for a decision just in the aiding capacity. Firstly, it is introduced on an experimental basis by the judges of Bombay and Delhi High Courts who deal with criminal proceedings.

Importance: It will generate outcomes personalized to the necessity of the case and the way the judge thinks. This will be time & cost effective as It will help the judges and the court in decreasing delays and pendency of cases. AI will give a more streamlined, cost effective and time bound way to the fundamental right of access to justice.

#### 4.1.2 SUVAS

SUVAS stands for Supreme Court Vidhik Anuvaad Software, This AI tool is developed by the Supreme Court to increase the reachability and understanding of judicial process by translation scrips of judicial documents. This tool shall be able to translate judgements, order or other judicial document of Supreme court initially into nine vernacular language scrips including: Assamese, Bengali, Hindi, Kannada, Marathi, Odiya, Tamil, Telugu, and Urdu which will be further expanded to other regional languages too. Later in 2023, the Kerala High Court, Delhi High Court and Karnataka High Court<sup>38</sup> also used this tool for translating judgements into several regional languages. cases related to Labour, Rent Act, Land Acquisition and Requisition, Service, Compensation, Criminal, Family Law, Ordinary Civil, Personal Law, Religious and Charitable Endowments, Simple money and Mortgage, Eviction under the Public Premises (Eviction) Act, Land Laws and Agriculture Tenancies and Consumer Protection are being translated.

#### 4.1.3 LIMBS

An AI based portal named Legal Information Management & Briefing System (LIMBS) portal. It has been developed to track Union of India litigation. The users of various Ministries/Departments enter details of the

<sup>37</sup> K.S. Puttaswamy and Anr. vs. Union of India ((2017) 10 SCC 1).

<sup>38</sup> Available at: <https://www.thehindu.com/news/national/karnataka/karnataka-high-court-launches-webpage-for-judgments-translated-into-kannada/article66755944.ece> (Visited at Apr 19, 2023).

cases pending in the Supreme Court, High Courts and District Courts. The users who are supposed to be involved with the case can then view and amend the data's details. 5.95 lakh cases are currently pending in the Supreme Court, High Courts, District Courts, and Tribunals, according to statistics from the LIMBS database. Yet, as LIMBS is a user based interface program, it captures data in a pre-defined format. Any inconsistency in the data supplied by the user must be reviewed and resolved at the level of the Ministry/Department. There is no information about the status of cases in which the State Government is a Party maintained under the LIMBS Portal, which is used to monitor litigation carried out on behalf of the Union of India. The purpose of the LIMBS Portal is to assist Central Government Ministries/Departments in managing their legal matters. The statistics of cases entered etc. are, however, shared as per National Data Sharing and Accessibility Policy (NDSAP) and is available at the website data.gov.in.<sup>39</sup>

## 4.2 IMPACT OF AI IN CRIMINAL JUSTICE SYSTEM FROM THE PERSPECTIVE OF LEGAL STAKEHOLDERS

Introduction of AI in criminal justice in India shall affect the interest of various stakeholder in India concerned with legal sphere, towards the benefits as well as to the peril. The major legal stakeholder shall be affected in the following way:

**4.2.1 JUDGES:** judges are looking at AI as a paradox. on one hand, AI will aid and ease down the complex tasks with higher level of accuracy at low level human efforts. Thus, to provide speedy justice which will lead to fulfilment of ultimate of duty of judge. On other hand, the judges are under threat of future replacement, ethical and security challenges and present fear of veracity of AI based reports.

**4.2.2 ADVOCATES:** AI is a dual side coin for advocates which on positive side reflects opportunities of easy effortless document review, contract framing and analysis, legal research preparing arguments as well as gateway of suitable and required knowledge. But on other sides it accompanies fear of employment by substitution, technical issues and work quality.

**4.2.3 POLICE:** AI is assessed as technical hand of police, which can help them in increasing efficiency of policing, surveillance, prediction and prevention of crime. Besides, all the merit, the use of AI will bring double check over the functioning of police will consequently increase their accountability.

**4.2.4 PARTIES OF THE CASE:** AI is comparatively a boon for the parties of the case as firstly, it will protect their right to speedy justice and personal liberty under article 2. Secondly, it will bring accountability and transparency in their case proceeding. For claimant, it will evade corruption from investigation and for accused it will protect their individual liberty by sentence based on unbiased prediction.

## 4.3 LIMITATIONS OF AI IN CRIMINAL JUSTICE SYSTEM IN INDIA

- a) **Policy and government initiatives:** in India, Supreme Court has itself took initiative to use advance technology AI and ML under e-court project initiative, to aid and improvise the judicial mechanism, but for now it has proposed it in higher judiciaries only. Whether the government will continue and broaden the scope of the use of AI in judicial hierarchy is uncertain. The use and extent of AI in judiciary is directly dependent on the government's approach towards its employment, as the government propose and funds for such employment.

<sup>39</sup> Government Of India Ministry of Law And Justice Department Of Legal Affairs, available at: <https://legalaffairs.gov.in/sites/default/files/AU3258.pdf>.

- b) **Infrastructural:** although Indian courts are digitalised to an extent under two phases of e-court project, yet the employment of AI in courtroom will require higher level technology procurement, which is a major challenge in the lower judiciary which are lacking with endorsement of technology as well as the technically trained staff.
- c) **Funds:** procurement of advanced processors and technological developers as well as initial employment cost at country wide level is a costly affair and seeks high allocation of funds from the budget.
- d) **Technical training:** as AI being an advanced technology will seek supervision by the person who is well acquainted with its use. even the SC committee recognised that a vast module of technical training to be conducted for utilising AI in judiciary in their report.<sup>40</sup>
- e) **Form of data:** AI works on data, which is its primary input. The certain the data is, the accurate the result will be. An organised or uncertain data will lead to malfunction of the target command.
- f) **Quality of work:** AI mimic comparative intelligence to human intelligence. besides all the efficiency and accurate functioning of AI, there remains a doubt who will verify the accuracy at each step of processing by AI, which hangs the threat of quality of work performed by AI.
- g) **Technological limitations:** it includes all technological limitation including ethical voids, security concerns, protection of sensitive data, miserable to cyberattack, black box problem false or unwanted predictive analysis and privacy concerns.

## CHAPTER 5

### 5.1 CONCLUSION

An interdisciplinary mix of an AI in the criminal justice system is the attraction of opportunities. India's criminal justice system is in need of reforms because it is plagued by numerous delays, judicial vacancies, FIR manipulations, no track of case progress, frequent adjournments, poorly organised data and records, improper document analysis, a lack of legal aid, strict legal language and procedures, and a shrouded lack of accountability. The most effective way to fix the main issues with the criminal justice system is with the use of modern technology. Since AI has features to reform the criminal justice system as a carrier of justice as well as a crime prevention mechanism, including Machine learning, AI is that interdisciplinary combination in the criminal justice system that has the ability to prosper the meritorious merger of law and technology. AI is a useful coin which has dual sides. the head contains the merits of time effectiveness, accuracy, effortless results & logical prediction. Whereas, the tails contain the demerits including employment threat, costly affair, ethical & privacy issue and security concerns. However, a progressive vision along with will of infusion can easily negate the effect of demerits by proper preparation and plan.

the supreme Court has already launched there AI based application (SUPACE, SUVAS & LIMBS) as an advance and initiative step. Thereby, directing the motivation of introducing AI in criminal justice system as well. All the legal stakeholder including judges, advocates, police and litigants are looking at AI with a dual vision. On one face, as a tool of effortless accurate analysis with time effective performance. On the other face, a threat of substitution, qualitative work, security and ethical challenges. Whatsoever different in

<sup>40</sup> Supra note 15.

perspective with regards to AI, one thing is common that it will facilitate speedy justice. Besides, all the advantages and positivity around AI, it has several limitations whether technical or other, should be considered and to be address to the extend they can be, for achieving meritorious label on merging AI in criminal justice system.

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