ROLE OF AI IN IMPROVING ACCESS
TO JUSTICE FOR UNDER-TRIAL PRISONERS

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Abstract

After going through the available data and studies, the researchers came across various challenges under-trial prisoners face, like prison violence, health problems, abuse, and, most importantly, delayed justice. These problems multiply manifold because of the alarming rate of overcrowding in prisons due to increasing under-trial prisoners and understaffing of prison officials, which has become a roadblock in the path of the judicial system in providing speedy trial and speedy justice for the under-trial prisoners. This study aims to determine whether AI can be an accessible and effective tool in providing assistance and speedy justice to under-trial prisoners despite limitations like the inability to understand nuance, context, and morality concerning cases. It uses algorithms to predict recidivism scores, case outcomes, and case summaries which may give inaccurate output at times because the facts and circumstances of the case are unique and different from the pattern observed in the cases based on which the algorithms were made. However, continuous monitoring and technological improvements will help reduce the inaccuracies to a minimum, filling up the gaps in the current justice delivery system, especially for under-trial prisoners.

Keywords: AI, Justice, Under-trial prisoners.

1.Introduction

According to the data collected in the year 2022 by Shibra [1], it is estimated that around 5,73,220 prisoners are in various prisons all over India; from those prisoners, around 4,34,302 prisoners, implying around 75% are under-trial prisoners.

Moreover, the ratio between the prison staff and prisoners in the Indian Prison is around 1:7, which means only one prison officer is available for seven prisoners in India. We know that the prisons are already overcrowded with a large number of prisoners awaiting trial; in addition to this, the severely understaffed prisons exacerbate the suffering of inmates making the prospects of receiving timely justice a distant dream. They are detained because they could abscond, tamper with evidence, threaten witnesses, or potentially repeat the crimes they have committed or commit new ones.

Since they are under-trials, they cannot legally be bound to work in prison. Their sitting idle increases their chances of being negatively influenced by the hardcore criminals in jails, especially when almost half the under-trials are young people falling in the 18 to 30 age group, with easily mouldable intellect [2].

Mere detention will not solve the problem; the trial needs to begin as soon as possible because if they are innocent, then languishing in prison is an injustice to them, as discussed in various judicial pronouncements.

One such landmark case is that of *Rudal Sah v. State of Bihar and Anr* [2] (1983) where the accused was arrested in 1953 on the charges of murdering his wife and was acquitted but was released in 1968 spending 14 years of his life in prison for a crime which he never committed

Another example is the 1994 ISRO Espionage case in which former space scientist Mr. Nambi Narayana [3], was also falsely implicated, illegally detained, and tortured in custody. The Supreme Court while delivering its judgment, referred *to D.K. Basu v. State of West Bengal* [4] and reiterated that *"Custodial torture is a naked violation of human dignity. which destroys, to a very large extent, the individual's personality."* The Supreme Court also condemned the arbitrary exercise of the power of police officials in the said case.

In the present times, such arbitrary exercise of power, as well as custodial torture of under-trial prisoners, can be kept under check using AI-enabled CCTV Surveillance cameras, which detect human movements and can alarm the prison officials if they detect movements mimicking physical violence.

When it comes to providing speedy justice, then AI tools like 'Casemine' can be used for case analysis or in developing software applications that help connect prisoners with available lawyers. Further, the use of Virtual Reality to rehabilitate prisoners and, the use of electronic tagging as an alternative to detention to track their movements and ensure they are present before courts whenever they are called in, conducting virtual courtroom hearings, etc., are just some uses of AI. Though AI might have its limitations, if it is used judiciously, it could work wonders in providing speedy justice to under-trial prisoners.

Given the challenges of overcrowding, understaffing, and the lack of timely justice for under-trial prisoners, this study seeks to explore the potential role of AI in mitigating these issues. Accordingly, the research is guided by the following key questions: (1) How can AI help understaffed prison authorities manage

overcrowded prisons? And (2) How can AI help provide access to justice to under-trial prisoners?

2. Literature Review

The present literature review is based on the selected, recent, and well-cited books and articles on the issues selected by the researcher as well as based on information collected from experts by way of interviewing them. The existing literature has covered the fundamental problems faced by under-trial prisoners and suggests the use of AI to resolve those problems. However, it does not cover in detail what possible ways AI could be used and what specific problem it would resolve. Studying the problems faced by prisoners along with detailed AI-enabled solutions would give a better understanding of the topic.

2.1. Proportion of people in jail to the proportion of people managing the jail system

The existing literature review provides the framework for how the current prison system works in India. Mentioned in the article Major Problems of the Prison System in India. Shubham [5] has provided a multifaceted analysis of the challenges experienced by the prisoners, especially the overcrowding challenges, including understaffing of prison officials, the ratio between them and prisoners being around 1:7, that is, only one prison officer is available for a total of seven prisoners in India. In contrast, the same ratio in the UK is 2:3.

Sukanya [6] also discusses the overcrowding in prisons as discussed by former Chief Justice of India of N.V. Ramana at a NALSA meeting in Jaipur stating that 6.22 lakh people have been imprisoned in 1,378 prisons ss against the actual capacity of 4, 03,739 people thus indicating that the overcrowding has risen to 155% which has led to the prolonged incarceration of under-trial prisoners for urgent attention.

2.2. Access to justice for under-trial prisoners

The existing literature suggests that justice dwells under a complex and multifaceted structure. Yin et al. [7] elaborates this point stating that in this complex structure the prisoners suffer from harsh conditions and consistently lack legal representation with less access to legal materials and absence of family support, which exacerbates the situation for these prisoners.

Garg and Singh [8] have discussed the deteriorating conditions of the under-trial prisoners with the lack of legal aid and basic human right not provided to them has led to hopelessness and despair among the prisoners and has spiked the rate of suicides among these individuals. They have highlighted the need of recognising and enforcing right to legal aid and suggested providing free social -legal services be provided as a part of the right to speedy trial.

2.3. Use of AI in justice delivery

AI can be integrated into the justice delivery system to give speedy remedies to under-trial prisoners. Utkarsh [9] in his article on the Indo-Singapore Judicial Conference, wrote about the Chief Justice of India, Mr. D. Y. Chandrachud, highlighting AI's potential to transform the judiciary by speeding up justice

delivery and improving efficiency through projects like the e-Courts project and the National Judicial Data Grid simultaneously he is cautioning against its indiscriminate use in judicial decisions. He referenced examples like Justice Juan Manuel Padilla using AI for a judgment in Colombia and the Punjab and Haryana High Court exploring AI in bail petitions.

3. Research Methodology

3.1. Non-doctrinal

Interviews of experts are used as a tool for this study and to understand the existing system's problems and how AI can address these issues.

3.1.1. Interview with Mr. UT Pawar, DIG(Prison), Pune

In the interview with Mr. UT Pawar, he said: " The Poor Prisoner Initiative is not able to achieve its aim of providing speedy justice because of firstly, the failure of various states/UTs to establish oversight committee, a core body for the process of identification of prisoners who need financial support and secondly because of the time-consuming process in cases where the under-trial prisoner is involved in two or more cases and granted bail in then the police will have to submit a report to the judiciary regarding his criminal antecedents for which it is necessary to study all the cases." When asked how AI could resolve the said issue he replied - "Today, almost every other person has become a part of the digital economy by using digital payment apps. There are software applications that can automate the process of analysing the financial condition of the said prisoner by studying their previous transactions. Such apps can also integrate geospatial technology, which is the use of satellite imagery to study areas where the inhabitants are usually from poor economic backgrounds; this will act as a secondary verification that the prisoner genuinely cannot afford bail and hence is eligible for the said scheme."

3.1.2. Interview with Ms. Swati Sathe, DIG (Prison), HQ, Govt. of Maharashtra

The core focus area of this interview was to understand the problems faced by those under trial because of the gap between the number of police personnel required, and the current workforce to look over the overcrowded prisons. The BPR&D Report also states the police-public ratio stands at 152.80 per lakh persons, much below the UN-prescribed standard of 222 per lakh persons. We asked Ms. Swati what the reasons for understaffing in the prison officials were.

She replied- "There are many factors responsible for the said understaffed position, to name a few- the slow recruitment process, retirements, untimely death, long working hours (on an average14 hours every day) tend to take a toll on the health of officials causing severe health issues. Moreover, the current working conditions of the officials demotivate the future generations to take up this job.

As far as how AI could be of help, she explained- AI-enabled Risk assessment programs can help identify the prisoner who has the highest chances of re-offending. Smart watches can help track their health, particularly stress levels, and notify the officials. This could help not only in preventing prison violence but also prevent self-harm and suicide by helping identify which prisoner is at the highest risk of attempting suicide or harming himself, thus diverting the clinical

resources/advice required for such prisoners. These small steps can help reduce the burden on prison officials to a great extent."

3.1.3. Interview with Mr. Sunil Dhumal (Yerwada jail superintendent)

He talked about the use of AI Cameras to help prison officials by alarming them whenever the camera detected any suspicious activity like fights amongst prisoners, or prisoners attacking the prison guards as well as keep a check on the staff so that they don't use their authority to abuse the incarcerated prisoners, especially the under-trial prisoners who were more prone to abuse by both the prisoners and even by some members of the prison staff.

3.2. Doctrinal analysis

This paper uses Doctrinal Analysis to analyse existing material on the subject of this paper including various articles, papers, case laws to get an answer for the research questions thus forming the base for the next section about results and discussion.

4. Results and Discussion

The criminal justice delivery system in India has seen more than 0.2 million under-trial prisoners being neglected in jail for many years where poor hygiene in prison, health issues, and prison fights make awaiting the trial even more difficult.

We know that **"Justice Delayed is Justice Denied"** The problems faced by prisoners along with possible solutions using AI are listed below:

4.1. Denial of basic human rights

The important terms here are both "basic" and "human" because one needs to understand that first we are talking about the very basic rights not limited to mere animal existence but a life with respect and dignity and second the word used is human. It is important to understand that even prisoners are humans. Hence, they too have some basic rights as held time and again by not only the Constitution of India but also international conventions like the Universal Declaration of Human Rights, and the Standard Minimum Rules for Treatment of Prisoners specify the standards of treatment with prisoners. Despite this the condition of the detainees is appalling. It has been observed that the prisons are filthy, filled with bugs and insects, with one shared washroom for multiple inmates and some prisons do not have bathrooms at all, leading to hygiene and health issues.

4.2. Subsisting prison violence even after prison panchayats

Meek first-time offenders or under-trial prisoners are tortured and made to do all the menial jobs and if they fail to do all the jobs, they have to face severe consequences like sleeping in front of smelly, overflowing toilets in the night.

It is not just the hardcore criminals who inflict violence on inmates; even the prison guards or police sometimes are involved, as seen in *Khatri v. State of Bihar* [10] also known as the "Bhagalpur blinding case", where several under-trial prisoners were blinded by police officials by pouring acid. Another example of custodial torture would be that of **Serial rapist and former police officer David Carrick** has been given 36 life sentences and will serve more than 30 years in

prison for crimes spanning almost two decades as he believed his position as a Metropolitan police officer made him "untouchable" in cases where he raped, assaulted and inflicted **"irretrievable destruction" on at least 12 women before intimidating them into silence** [11].

At first, there were prison officers appointed to keep a check on prisoners, then simple CCTVs installed in the prison to physically monitor inmates to see if any fights took place between inmates. Now, smart cameras are being developed. These have motion sensors, and a lot of data is fed into them while programming to help them identify that the action taking place before the camera is that of a fight, and they instantly alarm the prison guards.

AI chatbots and voice assistants can be used to identify signs of mental distress, provide emotional support, and alert mental health professionals so that they can take timely action. Such chatbots could be used to give access to prisoners to complain about any custodial torture faced by inmates to the higher authorities with the assurance that the name of the complainant is not revealed so that prisoners can complain without the fear of being tortured for complaining.

4.3. Criminalizing effect of hardcore criminals on first-time offenders

The under-trials cannot be legally made bound to work in prison, giving them idle time to interact with the hardcore criminals who are a terrible influence, thereby making reformation nearly impossible, here Risk Based Assessment Programs can be used to separate hardcore criminals from the under-trials by assigning recidivism (chances of re-offending) scores by analysing their criminal history, this separation of prisoners could solve the problem to a large extent. Certain risk-based assessment programmes are already being used in countries like the U.K. having COMPAS [12] or Correctional Offender Management Profiling for Alternative Sanctions or European countries having OxRec [13] or Oxford Risk of Recidivism Tool.

4.4. Health problems

Physical *health problems--* Due to overcrowding in prisons, inmates suffer from skin diseases as well as other health problems like suffocation, poor hygiene, and other infections.

Mental *health issues--* Prolonged incarceration, as rightfully stated by Sir Alexander Patterson, may lead to a mental breakdown, sometimes resulting in such detainees resorting to self-harm and even attempting suicide.

AI can help here by speeding up the adjudication process to reduce the overcrowding as well as the mental agony faced by under-trial prisoners. The use of GPS wrist wearables like Talitrix [14], can help monitor real-time location, heart rate, etc., to monitor health issues. Moreover, such wrist wearables also prevent the social stigma around inmates wearing ankle monitors.

As far as India is concerned, Odisha plans to fit GPS tracking devices on under-trial prisoners, costing around ten to fifteen thousand, to reduce prison overcrowding [15]. Fazel et al. [16] has discussed there is a need of systematic analysis of all the risk factors which contribute to a prisoner committing suicide. AI is now being used to develop algorithms to take data from medical records, prison records, and social media posts to analyse the person's way of thinking, focusing on information that indicates the probability of attempting suicide and self-harm and assigning risk scores

or probabilities to these prisoners to see who could be at high risk of committing such acts so that preventive actions can be taken accordingly.

Currently England and Wales places people in prison who might try to harm themselves or express suicidal tendencies on a suicide risk management plan called an ACCT (Assessment, Care in Custody and Teamwork) which helps reduce the immediate risk of suicide and self-harm. However, after the closure of the ACCT, the risk of self-harm remains high for some time. The RAPPS or Risk Assessment for Prisoners at risk of Self-harm and Suicide project aims to develop a risk assessment model or tool that could help in professional decision-making while closing ACCT to identify who are still at high risk of resorting to self-harm thereby helping allocate resources accordingly and scheduling follow-up sessions if required.

4.5.1. Impact on families of the prisoners

Living away from family is 1 of the leading causes of depression in both the inmate and his family. Websites like 'e-Prison' are a repository of vital information about inmates lodged in prisons. This information can be accessed in real-time and relayed to courts and prison officers so they can schedule visits from the family using the 'e-Mulakat' feature, where visitors have to register themselves to book an appointment to see an inmate. It has an option of video conferencing for the inmate to see their family online, which helps prisoners interact with the outside world and gives them mental peace.

The prisoners are unable to look after their families, and this becomes a big problem if they are the sole breadwinners. AI can be used to teach them some vocational courses to help them earn while in prison and send that money to the family. Moreover, the use of Virtual Reality (VR) helps them learn skills required upon their release to earn a living as many under-trial prisoners end up staying for decades in prison, and when they come out the surroundings have changed a lot, making it difficult to cope with. VR can help them rehabilitate once they are released. This move has already been initiated by Europe under the project named- 'ViRTI Project' [17].

4.5.2. Twenty-one judges per million people

The grossly inadequate number of judges is well reflected in the ratio of 21.03 judges per million people in 2023 despite the Law Commission's 1987 report, which recommended a ratio of 50 judges per million people back then, causing delays in hearing and disposing of cases [18]. Procedural delays, absence, or belated service of summons on witnesses, and an inadequate number of police personnel and police vehicles preventing the timely production of prisoners for their court hearings are some of the problems faced because of the gap between the judges and the under-trial prisoners.

Use of AI tools like Casemine for legal analysis or apps for connecting the prisoners with available lawyers or apps to answer basic questions like why they are arrested, what their rights are, and remind them about the date of hearings so that they do not miss the same, use of translation feature in software applications for making the application more user-friendly by overcoming linguistic barriers, are all ways to help serve speedy justice with the existing gap of judges and prisoners [19]

5. Conclusion

It is understood that prison overcrowding is a major problem, the leading cause behind the same being delayed justice for under-trial prisoners as reiterated in various judgments time and again.

One such case is *Shaheen Welfare Association v. Union of India* where the Supreme Court emphasized the need to decongest prisons and reduce overcrowding, for which the court directed the implementation of measures such as parole, bail, and setting up of additional fast-track courts to expedite trials and reduce the burden on prisons [20].

All this can be achieved using AI. This can significantly enhance the accessibility to legal remedies for the marginalized and vulnerable communities who languish in prisons as under-trial prisoners.

There are ethical considerations and potential biases which need to be kept in mind while finding and implementing the above-mentioned solutions. It is known that a machine or AI has no emotions or ethics as it works on programming done by a human. If the data fed into the algorithm is itself biased/unethical then AI tools like Risk based assessment programmes are bound to give biased outputs. For example, the data fed in the algorithm has only those cases in which convicts were of a specific caste, creed, race, or colour, then the AI will give a biased output which will be against the prisoners of that caste, creed, race, or colour.

AI can never replace the reasoned decisions given by judges as the facts and circumstances of each case are different; the circumstances in which one person committed the crime are of huge importance in deciding what punishment they deserve. AI, despite lacking the ability to understand nuance, context, and morality with respect to cases, can still lend a helping hand in decision support by way of risk management, monitoring, update of case status, streamlining court processes, reducing backlogs and efficient case resolution.

AI based technology in today's world is changing rapidly. There needs to be more research for continual improvements in technology and its judicious use can help achieve the goal of giving access to justice and, more importantly, speedy justice to under-trial prisoners. However, merely keeping up with technology is not sufficient until there is a law governing the use of AI. The AI which could help a prisoner get speedy justice might result in wrong convictions if there is no regulatory body checking the accuracy and legality of the risk-based assessment programme. Hence, AI monitoring as well as improvement together is a very important research area for the future.

References

1. Shibra, S. (2024). Majority of prison under-trials youth, From oppressed communities. Retrieved March 5, 2024, from https://www.newsclick.in/majority-prison-undertrials-youth-oppressed-communities
2. Ruchika, M. (2024). Rudal Shah v. State of Bihar: Compensation for violation of fundamental rights. Retrieved November 13, 2024, from https://lawctopus.com/clatalogue/clat-pg/rudal-shah-state-of-bihar-case-analysis/

3. Harmanpreet, K. (2021). Delving into Nambi Narayanan case with light to events in recent days. Retrieved March 5, 2024, from https:// blog.ipleaders.in/ delving-nambi-narayanan-case-light-events-recent-days/

4. Sonakshi, P. (2023). Overview of D.K. Basu v. State of West Bengal. Retrieved November 3, 2023, from https://www.khuranaandkhurana.com/ 2023/11/03/overview-of-d-k-basu-v-state-of-west-bengal/

5. Shubham, K. (2022). Major problems of prison system in India, Times of India, Retrieved January 1, 2022, from https://timesofindia.indiatimes.com/read ersblog/shubham-kashyap/major-problems-of-prison-system-in-india-40079/

6. Sukanya, S. (2022), Over 6 lakhs in spaces meant for 4 lakhs: Indian prisons are seeing unprecedented overcrowding, Retrieved July 18, 2022, from https://thewire.in/rights/indian-prisons-congested-overcrowded

7. Yin, E.T.; Korankye-Sakyi, F.; and Atupare, P.A. (2021). Prisoners' access to justice: Family support, prison legal education, and court proceedings. *Journal of Politics and Law*, 14(4). 113-125.

8. Garg, C.; and Singh, S. (2023). Voices from behind bars: Narratives of under trial prisoners in the Indian justice system Retrieved July 18, 2024, from https://ssrn.com/abstract=4461732

9. Utkarsh, A. (2024). Chief Justice of India DY Chandrachud advocates for ethical AI integration in legal research, Retrieved April 13, 2024, from https://www.hindustantimes.com/india-news/ai-can-streamline-speed-up-delivery-of-justice-cji-101713035043680.html

10. Aishwarya, A. (2024). Khatri vs. State of Bihar. Retrieved November 19, 2024, from https://lawbhoomi.com/khatri-vs-state-of-bihar/

11. Vikram, D.; and Sinmaz. E. (2023). David Carrick jailed for life over series of rapes while met police officer, The Guardian. Retrieved May 1, 2024, from https://www.theguardian.com/society/2023/feb/07/david-carrick-jailed-life-rapes-met-police-officer

12. Jackson, E.; and Mendoza, C. (2020). Setting the record straight: What the COMPAS core risk and need assessment is and is not. *Harvard Data Science Review*, 2(1), 1-16.

13. Fazel, S. et al. (2016). Prediction of violent reoffending on release from prison: Derivation and external validation of a scalable tool. *The Lancet Psychiatry*, 3(6), 535-543.

14. Gaines, J. (2023). Talitrix: What does maker of inmate-monitoring wristbands do? Retrieved April 25, 2024, from https://www.ajc.com/news/talitrix-what-does-it-do/zaeiptithfd75orkob6hwbmbni/

15. Bisoyi, S. (2024). Why Odisha wants to attach tracking devices on under-trial prisoners. Retrieved on April 25, 2024, from https://indianexpress.com/article/ explained/explained-law/odisha-tracking-undertrial-prisoners-8927148/

16. Fazel, S.; Cartwright, J.; Norman-Nott, A.; and Hawton, K. (2008). Suicide in prisoners: a systematic review of risk factors. *The Journal of Clinical Psychiatry*, 69(11), 1721-1731.

17. Pires, A.R. et al. (2021). The potential of virtual reality for education and training in prisons. Retrieved April 25, 2024, from 10.13140/RG.2. 2.29588.63366

18. PTI. (2023). India's judge-population ratio stands at 21: Law minister tells LS. Retrieved December 19, 2024, from https://www.hindustantimes.com/cities/delhi-news/indias-judge-population-ratio-stands-at-21-law-minister-tells-ls-101702050805063.html

19. Artificial Lawyer. (2018). Meet India's casemine, shaking up the legal ai case analysis market. Retrieved December 19, 2024, from https://www.artificiallawyer.com/2018/02/15/meet-indias-casemine-shaking-up-the-legal-ai-case-analysis-market/

20. Roy, S.; and iPleaders. (2021). Realities of article 21 in prisons. Retrieved December 19, 2024, from https://blog.ipleaders.in/realties-article-21-prisons/