NFSU JOURNAL OF LAW & ARTIFICIAL INTELLIGENCE

JLAI
Volume: 2, Issue: 1
June 2023
E-ISSN: 2584-1661

AI POLICING IN CRIMINAL JUSTICE: METHODS & CONCERNS IN CRIME DETECTION AND PREVENTION IN INDIA

Manoj Meena*
Aishvarya Joshi**

Abstract: *Artificial intelligence no longer remains a concept to be speculated about, in 2018, Daniel Flagella at INTERPOL in UN global meet mentioned the term AI Policing, which is a derivative theorem of AI and Law. This legal tech tool is and can be used to catch criminals and their unlawful acts through video technology, robotics, surveying crime scenes, facial recognition, analysis of text-based intelligence, video and audio analysis, vehicle identification, and surveillance which can enhance the propensity to deal with many crimes. AI algorithms through predictive policing can easily reduce the risk through the massive amount of data on criminal activities. However, the lack of human oversight in automated processes, inaccuracy of data, and biases in AI prediction due to social inequalities in the country are the imminent threat of misuse, inaccuracy of judgments, and threat to fundamental rights. AI Policing suffers from ethical and legal issues unless regulated and addressed effectively. This doctrinal study explores the applications of AI in policing to detect and prevent the crime before its occurrence. Further, it attempts to highlight the ethical and legal challenges in the execution of AI Policing in India. Finally, the study suggests measures to improve accuracy and efficiency in addressing the ethical and legal issues for a smart and robust criminal justice system.*

Keywords *– Artificial Intelligence, Criminal justice system, crime detection, predictive policing*

1. INTRODUCTION

A generation of mathematicians, physicists, an d philosophers became familiar with the idea of artificial intelligence in the 1950s. By asking the question, "If a human is using available data or pieces of information to find out the causes of problems, then why cannot we employ machines for a similar function?" Alan Turing, a British polymath, came up with a mathematical possibility of artificial intelligence. He discussed this framework in his paper, "Computing Machine Learning an Intelligence," published in 1950, in which he discussed how machines can function intelligently. But due to a lack of computing features, he couldn't reach an effective solution, where computers can't remember the tasks done and could only get the function of doing new tasks plus it was an expensive affair.[1]

Later, as AI grew, machine learning algorithms improved, giving individuals a better means to solve their issues using algorithms. At this point, computers could store large amounts of data and were quicker, more widely available, and less expensive. AI gained much huge publicity when the top chess masters of the world were defeated by the IBM's AI based chess program 'Deep Blue' in 2011. It was followed by development of speech recognition softwares, humanoid robots which could depict and recognizing emotions, to AI news readers and AI policing. According to UNESCO, "there have been spectacular advances in the field of artificial intelligence (AI) in recent years, leading to inventions that we had never thought possible".[2]

The United Nations Development Initiative and the Indian government launched the Knowledge-Based Computing Systems (KBCS) programme in 1986, which marked the official start of AI research in India. The project on Machine Translation for Indian Languages by IIT Kanpur, the project on Optical Character Recognition by ISI Kolkata, the flight-scheduling expert system, Sarani,

* Advocate, Bar Council of Rajasthan
**Assistant Professor, Department of Law, University of Rajasthan, Jaipur

[1] AI, 'A brief History of Artificial Intelligence', < https://indiaai.gov.in/article/a-brief-history-of-artificial-intelligence> accessed 23 May 2022

[2] 'Towards a global code of ethics for artificial intelligence research', The UNESCO Courier, July-September 2018, p. 3 <https://unesdoc.unesco.org/ark:/48223/pf0000265211> accessed 22 May 2022

developed by CDAC, Mumbai, a speech synthesis system created by TIFR for the Indian Railways, and an image-processing facility using AI and vision techniques developed by IISc are some of the earliest projects on artificial intelligence in India.[3]
Even Nevertheless, some of AI's potential uses raise ethical concerns, such as data collecting that invades privacy, face recognition technology that may be biased against certain races or that is intended to identify aggressive behaviour. The ethical issues that AI brings are numerous and will definitely persist in the future, becoming more serious. That's how computers surpassed our needs for AI through their fast-speeding processor and heavy storage as estimated by Moore's Law.

1.1 What is AI?

According to the report by AI standardisation committee, "there is no uniform and globally accepted definition of AI". [4] Alan Turing believed that "if a machine can talk to a person and will be mistaken to be human, then the machine is intelligent". Several definitions can be considered for understanding the notion of AI including:

- John McCarthy defines AI as "a science and engineering of making intelligent machines, especially intelligent computer programs".[5]
- Kaplana and Haenleinb defined AI as "a system's ability to correctly interpret external data, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation".[6]
- NITI Aayog defines AI as "a constellation of technologies that enable machines to act with higher levels of intelligence and emulate the human capabilities of sense, comprehend and act".[7]

In other words, AI refers to a machine's or human-controlled robot's capacity to carry out tasks in the same way as intelligent humans do. This phrase is widely used when building systems that have human-like intellectual abilities including generalisation, meaning discovery, learning from experience, and the capacity to provide justifications.

1.2 Predictive and Preventive Policing in India

In order to identify potential targets for crime prevention or to solve prior crimes through police involvement, predictive policing applies analytical tools, notably quantitative approaches. Even twenty years ago, before big data, law enforcement agencies like the New York Police Department (NYPD) were already heavily utilising crime data to track trends with other indicative issues, such as the locations of crime victims and gun arrests. However, what is new is the amount of data available in the collection as well as the ease with which organisations can analyse and draw conclusions. Specifically, when emerging technologies allow us various applications and more rigorous interrogation of data, including greater accuracy in predicting future incidences of crime.[8]

In January 2020, the Indian state, Himachal Pradesh installed thousands of CCTVs to have 'CCTV surveillance'. Jharkhand developed its IT infrastructure after getting funds from the Ministry of Home Affairs. The Jharkhand police utilised this 18.5 crore money for predictive policing in association with the open group on e-governance and the National Informatics Centre (NIC).[9] Similarly, many other state governments have taken initiative, particularly in law enforcement to use analytical techniques to prevent or solve crimes. Crime mapping, analytics, and prediction system (CMAPS), a programme that can access real-time data, was first used by Delhi police in 2015 to implement predictive policing in the city. In addition, other states

[3] 'Artificial Intelligence in India – A Sneak Peek', <https://Inurture.Co.In/Artificial-Intelligence-In-India-A-Sneak-Peek/> accessed on 20 May 2022
[4] 'Indian Intelligence Artificial Stack', 2020, AI Standardisation Committee, Department of Telecommunications <https://www.tec.gov.in/pdf/Whatsnew/ARTIFICIAL%20INTELLIGENCE%20-%20INDIAN%20STACK.pdf> accessed on 20 May 2022
[5] John McCarthy, 'What Is Artificial Intelligence?', <https://homes.di.unimi.it/borghese/Teaching/AdvancedIntelligentSystems/Old/IntelligentSystems_2008_2009/Old/IntelligentSystems_2005_2006/Documents/Symbolic/04_McCarthy_whatisai.pdf> accessed on 20 May 2022
[6] Andreas Kaplana & Michael Haenleinb, 'Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence', Business Horizons, Volume 62, Issue 1, January–February 2019, pp. 15-25, <https://doi.org/10.1016/j.bushor.2018.08.004> accessed on 20 May 2022
[7] 'National Strategy for Artificial Intelligence', **NITI Aayog, 2018,** <http://www.niti.gov.in/writereaddata/files/document_publication/NationalStrategy-for-AI-Discussion-Paper.pdf> accessed on 20 May 2022
[8] Rohan George (24 November 2015) < cis-india.org > accessed 24 May 2022
[9] Ibid

JLAI
Volume: 2, Issue: 1
June 2023
E-ISSN: 2584-1661

like Madhya Pradesh, Uttar Pradesh, Punjab, and Rajasthan have also adopted such use of technology, especially for facial recognition.

1.4 Challenges to Predictive Policing

Every pro has a con, similarly implementing the latest technology will have its implications, where public and private entities are suggested to make AI more inclusive addressing issues of bias and making it more open and accessible to a large number of masses. Here, enforcement agencies are aiming to remove human interventions to reduce the number of errors that will always be a part of it making laws and supporting the enforcement system.

Rather than looking for the criminals in the historical data, predictive analysis is done to find out people who were more police, there is a legitimized discrimination behind this mathematical analysis, as lower caste and religious minorities have faced more violence and discrimination despite constitutional remedies.[10]

In the case of "Ankush Maruti Shinde v. State of Maharashtra"[11], due to their ethnicity, the police assumed they were guilty and sentenced them to 16 years in solitary prison. Other groups, including as Muslims, Dalits, and Adivasis, also face prejudice in the criminal justice system. Predictive analysis also uses a huge amount of personal data violating the right to privacy as envisioned under the case of "Justice K.S. Puttaswamy (Rtd.) v. Union of India"[12], where the use of such data must be sanctioned by law, and under a democratic society, procedural safeguards against such misuse must exist, and appropriate interference is a necessary issue. Such use of AI in law and order needs greater transparency, increased supervision, and adequate mechanism. Any government data collection that necessitates proactively informing a person about how their data is used should be subjected to a rigorous evaluation as this data is not only gathered by public authorities but also by commercial organisations.

[10] Ramchandran Murugesan, 'Predictive Policing in India: Deterring crime or Discriminating Minorities?' <https://blogs.lse.ac.uk/humanrights/2021/04/16/predictive-policing-in-india-deterring-crime-or-discriminating-minorities/> accessed on 24 May 2022

[11] **(2009) 6 SCC 667**

[12] (2017) 10 SCC 1

2. ARTIFICIAL INTELLIGENCE IN PREDICTIVE AND PREVENTIVE POLICING

According to Lau, predictive policing "is the use of algorithms to analyze massive amounts of information to predict and help prevent potential future crimes".[13]

2.1 Various applications of AI in Policing

- According to the report published by Carnegie endowment[14], 56 countries are using the technology of face recognition where EU is one of them where 40 civil organizations have demanded to ban predictive policing and the European Commission has proposed to regulate such an act.
- 15 states in India are the most surveillance cities named, including Delhi, Indore, Chennai, and Hyderabad with the greatest number of CCTV cameras. In IHS Markit's latest report Delhi topped the list followed by Chennai and Mumbai. In 2021, Kolkata police announced the installation of 2500 CCTV which will be to spot bikers with helmets and vehicles in illegal parking. As per the increasing facial recognition, it seems by 2024 this number will multiply by 6 times and will get close to China's surveillance system. Further Telangana is planning to build an integrated police center in banjara hills costing 800 crores for law enforcement to view surveillance footage across the city in real-time.
- Other countries are also similarly adopting technology at a fast pace like China, the US, the UK, Japan, Brazil, and Singapore, In US cities like Detroit, Orlando, and Washington DC are testing the use of facial recognition videos for Safety and security according to the report by Georgetown University Centre on Privacy and Technology.[15] China surpasses the US market in city surveillance networks, with one camera for 4.1 people, whereas India has the world's largest biometric database which can easily scan irises, fingerprints, and photos of citizens. This can be a challenge to the privacy of people

[13] T. Lau, 'Predictive Policing Explained', Brennan Center for Justice, 2020 <https://www.brennancenter.org/our-work/research-reports/predictive-policing-explained> accessed 25 May 2022

[14] Steven Feldstein, 'The Global Expansion of AI Surveillance' < https://carnegieendowment.org/2019/09/17/global-expansion-of-ai-surveillance-pub-79847> accessed on 24 May 2022

[15] Clare Garvie & Laura M. Moy, 'Face Surveillance In The United States' America Under Watch <www.americaunderwatch.com> accessed on 24 May 2022

as it can be misused by our authorities which they claim to be secure and not meant for monitoring people in general. Singapore has also installed 80,000 smart cameras which are capable of analytics through running videos which a quite progressive.

2.2 Global Best practices

2.2.1 UN on AI in Law Enforcement[16]

A new pattern of predicting crimes and criminal behaviour is now being aimed through AI technologies which can change the face of law enforcement in our legal system. This technique is being used through a large amount of data and robotics which uses data analysis to forecast high levels of crimes. This is also resulting in a threat to the international community, violating their human rights and privacy. State authorities may be using racial or ethnic profiling to target particular groups or expand the capability of monitoring through the use of technologies like face or fingerprint recognition.

The majority of nations are in the emerging stage and they are eager to learn from one another, particularly from the commercial sectors that are putting AI and robots into practise. As of 2017, UNICRI developed a centre concentrating on criminal justice, crime prevention, and security in general. This indicates that AI technologies are still in their infancy.

This was the first gathering in this area for law enforcement, and the UN and INTERPOL jointly convened the event to examine innovations, possibilities, and concerns related to AI and robots and to handle new issues. Both the use of AI to catch criminals and the use of AI by criminals were covered in the discussion. The role of the UN under such surveillance gadgetry would be threefold:

- First and foremost, more conversations and debates will be held to increase public understanding of AI, particularly in poorer nations where AI has a negative social and economic impact.
- Second, they may optimise the advantages of AI-driven technology while taking into account the SDGs alongside other UN programmes.
- Thirdly, the UN will discuss such complete concerns and identify any minor or significant threats.

2.2.2 US in AI Policing

The US is amongst the top AI users, where AI applications are discussed for competition, employment, data protection, privacy, legal enforcements, sectoral growth, etc, here also facial recognition cameras and predictive policing play a major role but keeping in mind the viewpoint of the public, regulatory reforms are being made to regulate the AI enforcement system in maintaining data privacy. There are no general guidelines for applying AI, but the White House Office of Science and Technology has listed 10 principles to take into account when drafting regulatory and nonregulatory procedure. A few of these principles are: use transparent risk assessment and risk management approaches; consider all societal costs, benefits, and other externalities when deciding whether to develop and deploy AI; consider the ethical implications of using AI; considerations when developing to adapt to the evolving nature of AI, pursue performance-based and adaptable techniques, determine the proper disclosure and openness levels to win over the public. The US generally remains highly on investments in AI and related technologies, and it can be overtaken by China as the US does have ample resources but it seems not to be utilized efficiently.

2.2.3 China in AI Policing

China is already a cutting-edge global leader in surveillance through AI, many Chinese firms have built software that uses AI to sort and organize data on residents by upgrading their tools. China has blanketed the cities with camera surveillance and planning to do the same across the rural areas. Recently the city named Handan launched 3 futuristic robots which are equipped with AI and facial recognition technologies, they help in patrolling, controlling traffic accidents, and in providing relevant information, equipped with a navigation system. They all are facilitated with big data technology which was the part of 13th Beijing 5 years plan.[17] In 2017 Zhengzhou police were equipped with smart eyeglasses for screening down people who are involved in criminal activities, which helped them to find

[16] Iraki Beridze & Summer Walker, 'Artificial Intelligence in Policing' <https://globalinitiative.net/analysis/artificial-intelligence-in-policing> accessed on 24 May 2022

[17] Bryan Ke, 'China Deploys First AI Robot Police That Tackles Criminals and Now We're Living in 'Black Mirror' <https://nextshark.com/china-ai-robot-police/> accessed on 26 May 2022

out through 10,000 identity databases at a speed of 100 milliseconds. Similarly, 20 million CCTVs were being installed all over China just to identify criminals through tracking facial recognition from their database. China is consistently growing by fuelling its desire to become the world leader in AI technology.[18]

Although the US remains ahead amongst other countries in AI forces, if China implements its strategies and policies effectively, it will soon replace the US. Through this, we can imagine the thriving of AI, data science, and machine learning.

2.2.3 UK in AI Policing

Facial recognition and predictive policing through AI are the emerging trends in the UK since 2014, this helps in capturing images of criminals by comparing them against the stored database, mostly this has been used by metropolitan police and south whale forces. 2019 report has found that 70% of the public supports the investigation by this technology and 55% want it to be done in special circumstances only. Through the shared Police National Database, which houses a vast amount of information including pictures and prior criminal records, all territorial police in the United Kingdom do have access to their history.[19]

The worry here is AI allows cost savings in different spheres, which will decrease other measurable benefits like community and relationship building, this may also increase efficiency gains misleading to produce unintended results. Second, the utilisation of historical data will make racial and gender prejudice worse owing to a lack of transparency, which may jeopardise the idea of policing by consent.

2.3 AI implementation in India's administration of the criminal justice system

According to the National Judicial Data Grid (NJDG), over crores of cases are pending in lower and higher judiciary. Surprisingly IBM robot 'ROSS' which is having data mining and identifying techniques will be used for back-end office work in litigation and arbitration process such as research work, and data storage, this will not only help our legal system in research but also in handling significant pendency of cases plus on counseling clients and taking on complex issues, in keeping track of the work being done by creating invoices which enables transparency to firms, clients, lawyers, and auditing authorities.

2.3.1 AI enforcement Agencies

To find criminals and solve such cases, Indian law enforcement agencies are turning to artificial intelligence (AI) technologies. Gurugram-based Staqu Technologies, which was founded in 2015, has developed a technology stack that includes "sophisticated image analysis, facial recognition, and text processing tools for entity recognition and summarization APIs". Recently this company has launched an AI-enabled application 'Artificial Intelligence-based Human Efface Detection' with the help of Rajasthan police to identify criminal identity and information of missing persons, similarly, the State of Punjab used this technology. Crime and criminal tracking systems can easily help us to search applications through biometric information like fingerprints, and face recognition, by this they have digitized more than 50,000 criminal records and have solved 100 cases. It can give 95% accuracy in facial recognition as to gender, facial changes, and facial occlusion. Smart glasses were also created by Staqu Technologies. These glasses have a built-in camera for face recognition to identify persons in a crowd, as well as data feeds that show images of objects onto the user's screen. Apart from this Kerala government use drones for facial recognition and identification using AI software, generally used for high-security zones, near airports, and at traffic, junctions to identify criminal suspects.[20]

2.3.2 Government Initiatives

AI holds the potential to protect our citizens from any kind of criminal acts and other related threats through better surveillance, faster grievance redressal, and smart policing,

[18] Holly Chik, 'Surveillance State: 18 of the World's 20 Most Monitored Cities are in China' <https://www.scmp.com/news/china/society/article/3094666/surveillance-state-18-worlds-20-most-monitored-cities-are-china> accessed on 26 May 2022

[19] Will Grimond & Asheem Singh, 'A Force for Good? Results from FOI requests on artificial intelligence in the police force' <https://www.thersa.org/globalassets/reports/2020/a-force-for-good-police-ai.pdf > accessed on 26 May 2022

[20] Abhishek Baxi, 'Law Enforcement Agencies in India Are Using Artificial Intelligence to Nab Criminals' <https://www.forbes.com/sites/baxiabhishek/2018/09/28/law-enforcement-agencies-in-india-are-using-artificial-intelligence-to-nab-criminals-heres-how/> accessed on 26 May 2022

JLAI
Volume: 2, Issue: 1
June 2023
E-ISSN: 2584-1661

which have been taken by the government agencies through cutting edge technology to improve citizen safety.

Following are a few operative AI initiatives[21]-

- **Government of UP-** recently UP and Staqu jointly employed 700 video analysis cameras across 70 prisons to have a 24/7 surveillance and data feed of the visitors to the prison, crowd analysis, violence and fights in prison, facial recognition and analysis, behavioural analysis and unauthorized intrusion. The real-time insights can be easily visualized by the police officials through a mobile application.
- **Government of Telangana-** In 2017 the Telangana police launched a smart Robocop with inbuilt cameras, GPS sensors, temperature sensors, and ultrasonic readers. This was designed by the Hyderabad company H-Bot to assist police officials in maintaining law and order, it has emergency flashlights and charging points with the technology of thermal imaging which can easily extend help for security purposes, in interacting with people, taking complaints, and solving queries.
- **Government of Haryana-** In 2018 Haryana government had an agreement with city cops to develop an application in replacement of the existing application Harpeth for road-related grievances to help in receiving complaints and analyzing same which can also reduce manpower and cost involved in the process.
- **Government of Maharashtra-** In 2015, they invested Rs 800 crore plan to secure cybercrime to prevent, predict, and detect cybercrimes in real-time. This works on big data and algorithms for collecting data on crime using available online sources.[22]

In Asia Pacific India stands 3rd after Singapore and Hong Kong and 19th on a global level, it is one of the most prepared economies with the government support in AI technologies but lacks creativity and innovations from the developed countries, where it is trying to build up such a tech-savvy environment through emerging start-ups with skilled professionals in AI, language processing and machine learning.

[21] INDIAai, 'Five AI Initiatives for Public Safety in India' < https://indiaai.gov.in/article/five-ai-initiatives-for-public-safety-in-india> accessed on 26 May 2022

[22] 'Maharashtra government to come up with 'predictive policing policy', PTI, <https://indianexpress.com/article/india/maharashtra-government-to-come-up-with-predictive-policing-policy-5097896/> accessed on 26 May 2022

3. ETHICAL AND LEGAL ISSUES OF AI POLICING IN INDIA

With the use of artificial intelligence, crime may be predicted, prevented, and recognised while it has already happened or is happening. Around the world, law enforcement agencies have been utilising AI-powered tools to investigate crimes and, on occasion, even attempt to forecast them. To locate the holy grail of policing—preventing crime before it occurs—the police are using predictive policing tactics employing data analytics, powerful computers, and intuition.[23]

W. Perry classified Predictive policing methods into four categories including "those which predict crimes, those which predict offenders, those which predict the perpetrator's identities and those which predict victims".[24] Some concerns regarding the nature of prediction in a time where data collecting and analysis are prevalent have been raised by each of these approaches. Ferguson observes that "foretelling the accurate identity of the future human 'criminal' presents a far more troubling prediction". The studies and civil liberties concerns may both be based on historical data with statistically significant correlations, but they are not the same.[25]

Most of the predictive softwares used by police and other agencies are basically hollow promises. This is demonstrated by the programme 'PredPol,' which was created by a significant software business and is regarded as the industry leader in predictive policing in the US. Predpol identifies the locations and times when specific crimes are most likely to occur so that these areas may be patrolled to prevent these crimes from occurring.[26] There are

[23] Justin Jouvenal, 'Police are Using Software to Predict Crime. Is it a 'Holy Grail' or Biased Against Minorities?', WASH. POST (Nov. 17, 2016), <https://www.washingtonpost.com/local/public-safety/police-are-using-software-to-predict-crime-is-it-a-holy-grail-or-biased-against-minorities/2016/ 11/ 17/525a6649-0472-440a-aae1-b283aa8e5de8_story.html?utm_term=.72a9d2eb22ae> accessed 23 May 2022

[24] W. Perry, et al, 2013, 'Predictive Policing: The Role of Crime Forecasting in Law Enforcement Operations', RAND Corporation, p.14. <https://www.rand.org/content/dam/rand/pubs/research_reports/RR200/RR233/RAND_RR233.pdf> accessed on 25 May2022.

[25] Andrew G. Ferguson, 'Policing Predictive Policing', 94 WASH. U. L. REV. 1109 (2017). <https://openscholarship.wustl.edu/law_lawreview/vol94/iss5/5> accessed 23 May 2022

[26] "Overview", PredPol <https://www.predpol.com/about/> accessed 23 May 2022

JLAI
Volume: 2, Issue: 1
June 2023
E-ISSN: 2584-1661

several difficulties that illustrate the necessity to carefully evaluate any excessive usage of AI and that there are times when those advantages appear to exceed those dangers. In order to highlight and solve the enormous ethical, legal, and social concerns that may develop in the future as we move towards an automated future with limitless potential for AI in law enforcement, Ang and Feinholz argue.[27]

3.1 Ethical Issues

Hannah Fry[28] has observed that "for all the positive impacts that AI may have on the criminal justice system, there will invariably be endless examples of unfairness engendered by algorithms".[29] Algorithms created to simulate intelligence will always make blunders. When law enforcement uses them, they could be pointless or unjust. There are concerns on how and when these tools have to used. Some of these issues are highlighted below:

- Confirmation Bias: The police are likely to predict and detect more crimes at a place with the use of AI, than they would have done otherwise[30]
- Most of the predictive technology and forecasting softwares and the algorithms which are used in them are proprietary. For a person like a judge or police officer the technological knowhow of the algorithms is not available. The accused person may not receive a fair trial and be denied their constitutional rights if there is no way to analyse these algorithms and how they produce their conclusions.[31]
- The great majority of judges strive to be as impartial as possible in the courtrooms, yet evidence has consistently demonstrated that they engage in discrimination. A judge's judgement must be free from racial, gender, and class biases according to judicial ethics. For instance, the parties would hope that judges were able to properly evaluate the entire case, balancing pros and drawbacks before coming to a judgement when granting bail. However, research by psychologists has revealed that judges only mentally run an organised checklist of red flags. If the defendant's account raises any of those red flags—previous convictions, links to the community, or the prosecution's request—the court will halt and refuse bail.[32] AI also applies similar structured algorithms to give a required decision.
- In case of facial recognition technologies there is a major concern regarding the "possibility for false identification." Consequences of false identifications can be severe for those who are wrongfully identified as a suspect/accused. According to Hanna Fry, "the more faces the algorithm searches through, the greater the chance of it finding two faces that look similar".[33]
- Objectives: When police or any agency decides to implement and utilize AI as a regulatory mechanism for crime than the priorities must be set out clearly. Is it keeping crime as low as it can be? or prioritising the innocent's right to freedom? What portion of one would you give up for the benefit of the other?[34]

3.2 Social Challenges

Some of the social concerns associated with use of AI in policing includes:

- Discrimination. Accuracy of Artificial Intelligence is dependent on the learning from fed data. However, when the data fed to AI is biased then it will results in bias in its decisions making and results. Bias may occur based on the factors like gender, race, colour, language, etc.[35] Furthermore, if just data from one ethnic group was utilised for the learning stage, facial recognition software may not be able to recognise members of that group.[36]
- In many situations, AI has the potential to be a very potent tool. AI may expose characteristics about people that they

[27] Tee Wee Ang and Dafna Feinholz, 'Working for, not against, humanity', The UNESCO Courier, July-September 2018, p. 29 <https://unesdoc.unesco.org/ark:/48223/pf0000265211> accessed 25 May 2022

[28] She is a British mathematician and an expert on computer science and human behavior. She has identified numerous ethical issues raised by the use of AI for crime analysis in her book.

[29] Hannah Fry, Hello World: Being Human in the Age of the Machine (New York, NY: W.W. Norton, 2018) at 330-332 <http://home.ustc.edu.cn/~ustcsh/py2016/data/Warren%20Sande,%20Carter%20Sande-Hello%20World!_%20Computer%20Programming%20for%20Kids%20and%20Other%20Beginners-Manning%20Publications.pdf> accessed 25 May 2022

[30] Ibid

[31] Danielle Keats Citron, 'Technological Due Process', WASH. U. L. REV. 1249 (2008) <https://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=1166&context=law_lawreview> accessed 23 May 2022

[32] Supra note 29

[33] Ibid

[34] Ibid

[35] Tolga Bolukbasi et al, 'Man is to Computer Programmer as Woman is to Homemaker? Debiasing Word Embeddings' (2016) <https://arxiv.org/pdf/1607.06520.pdf> accessed 28 May 2022

[36] 'Is facial recognition technology racist?', The Week UK (27 July 2018), <https://www.theweek.co.uk/95383/is-facial-recognition-racist> accessed 28 May 2022

would prefer to keep private or aren't even aware of themselves by inferring those characteristics based on other data. If not handled appropriately, it may also be used to push a large number of people in a particular way, undermining democratic values. AI runs the danger of preserving biases in the data it uses to learn from. This might maintain systemic inequality and strengthen the status quo. Given how challenging it may be to comprehend AI models, this distinction may be difficult to notice.

- AI applications can't set aside the human component entirely. On the basis of data the algorithms usually derive results or a number, but the interpretation of such results or number is for the user. Završnik highlights this with an illustration that "at what level of probability of recidivism should a prisoner be granted parole? Whether this threshold ought to be a 40 percent or an 80 percent risk of recidivism is an inherently 'political' decision based on the social, cultural and economic conditions of the given society".[37]
- Increasing Crime using AI: The criminals have inclined to use AI for engaging Social Engineering, Phishing, Vishing, for eliciting information".[38] Matt Chessen throws light on "use of AI target messages so they become more convincing to certain people based on their socio-demographic characteristics or psychological traits".[39]
- The accuracy of predictive police algorithms depends on the quality of the data they use, and skewed data institutionalises prejudice against minorities. It's also possible that the government monitors its residents using predictive policing technologies.[40]

3.3 Legal Concerns

Utilizing AI for proactive policing, the law enforcement will supposedly be able to:

- Predict the criminal areas.
- Predict who will commit the crime.
- Select the pretrial release option.

Rowena Rodrigues[41] states that the employment of AI in police raises a number of legal difficulties. Some of these are related to:

- The structure and makeup of AI itself
- Problems with the implementation
- Using AI

These issues are interconnected and are common of all computer technologies such as privacy/data protection, transparency, fairness, accountability, etc.

3.3.1 Data Generation, Vulnerabilities and Responses

The development of AI may be abused to provide data that seems incredibly real. Such false information may be employed in social engineering techniques. The users have learned to manipulate the images using softwares like Adobe Photoshop. With the help of AI they can even manipulate media such as sound and video at a large scale. The FakeApp tool released by Reddit allowed users to do "generate fake videos using deep learning networks that rely on a technology known as autoencoders".[42] Such data generation and vulnerability in data is likely to cause serious concerns for AI policing when the data is related to a crime suspect or a future criminal.

3.3.2 Privacy Issues

The right to decide when and to whom to release personal information can be referred to as privacy. This privilege is significantly threatened by contemporary artificial intelligence capabilities and the extensive collecting of private data. Predictive policing algorithms employ enormous amounts of personal data, which undoubtedly has a negative impact on the right to privacy. The privacy rights outlined in Justice K.S. Puttaswamy (Retd.) v. Union of India are violated by the use of personal data that is opaque.[43]

3.3.3 Opacity with respect to Algorithms

[37] A. Završnik, 'Algorithmic justice: Algorithms and big data in criminal justice settings', European Journal of Criminology, (2021) 18 (5), pp. 623–642. DOI: 10.1177/1477370819876762

[38] "Vishing", Security Through Education, <https://www.social-engineer.org/framework/attack-vectors/vishing/> accessed 28 May 2022

[39] Matt Chessen, 'The Madcom Future: How Artificial Intelligence Will Enhance Computational Propaganda, Reprogram Human Culture, and Threaten Democracy...and What Can Be Done About It', The Atlantic Council (1 September 2017), <https://www.scribd.com/document/359972969/The-MADCOM-Future> accessed 27 May 2022

[40] Supra Note 10

[41] Rowena Rodrigues, Legal and human rights issues of AI: Gaps, challenges and vulnerabilities, Journal of Responsible Technology, Volume 4, 2020, <https://doi.org/10.1016/j.jrt.2020.100005> accessed on 28 May 2022

[42] Gaurav Oberoi, 'Exploring DeepFakes', Hacker Noon (5 March 2018), < https://hackernoon.com/exploring-deepfakes-20c9947c22d9> accessed on 27 May 2022

[43] (2017) 10 SCC 1

JLAI
Volume: 2, Issue: 1
June 2023
E-ISSN: 2584-1661

Furthermore, it is impossible to determine the precise workings of predictive policing algorithms since law enforcement agencies are excluded from disclosure under the Right to Information Act of 2005. Due to this opacity, many people, including myself, believe that predictive policing is governmental monitoring that is disguising itself as internal security.[44]

3.3.4 Gap in Legal Framework

There isn't a comprehensive data protection legislation in force in India right now. Also, the regulatory guidelines on use of AI by law enforcement is still to see the light of the day.

4. MEASURES FOR ACCURATE AND EFFECTIVE AI POLICING IN INDIA

For governments whose law enforcement agencies want to deploy AI, there are several options accessible. These options call for proactive legislation infused with a dedication to the minimal criteria for openness, oversight mechanisms, and multidisciplinary collaboration. The government supporting law enforcement agencies who are experimenting with AI also has a growing body of research at its disposal on the best practises for algorithmic decision-making.

The results of the study conducted by Alexander Babuta, Marion Oswald, and Christine Rinik for the Royal United Services Institute in the UK offer critical insight into the policies that could be implemented to increase the accountability, precision, and effectiveness of AI policing, regardless of jurisdiction. Some of these measures could be adopted in India as well. These include[45]:

- It is vital to create guidelines and rules of conduct that specify how law enforcement should test and employ algorithmic technologies.
- The use of algorithmic tools by police forces must adhere to minimal criteria set by a regulatory framework, particularly in relation to applicable data protection laws, the AI system's openness and understandability, and adherence to administrative law and human rights principles.
- All public procurement agreements should include a provision requiring the retroactive deconstruction of the algorithm in order to evaluate the factors that impacted the model's projections.
- To guarantee conformity to this regulatory framework, a defined system of inspection and oversight (such as a commission, taskforce, committee, board, etc.) is required. These ethical committees ought to be interdisciplinary and comprise a mix of professionals, subject-matter specialists, academics, and maybe ordinary or lay people.
- To guarantee that all specialists and stakeholders are represented, the strategy should be collaborative and bridge disciplinary boundaries. This body ought to advise specific law enforcement organisations on best practises, strategies, and overall policies pertaining to the employment of algorithms.

5. CONCLUSION

Body cameras that fit properly and the usage of AI to create crime reports and forecasts are examples of how artificial intelligence is becoming more prevalent in police. However, a much more contentious and far-reaching application of this technology is using it to ascertain if a crime was actually committed. For instance, artificial intelligence is utilised in the developing subject of predictive policing to anticipate future crime hotspots, such as where and when a specific kind of crime is most likely to occur. The performance of AI is based on an algorithm designed by a human being and it performs on the basis of data fed by the humans. Human are bound to make mistake, so will the AI. However, it is not ethical to give that authority to a computer when mistakes made by AI result in someone losing their freedom or being charged with a crime. To address the ethical, social, and legal issues raised by the use of artificial intelligence in police, the government must develop technological, legal, and algorithmic solutions.

[44] Supra Note 10

[45] A. Babuta, M. Oswald, & C. Rinik, '*Machine Learning Algorithms and Police Decision-Making: Legal, Ethical and Regulatory Challenges*'. Whitehall Reports, no. 18, vol. 3, 2018, Royal United Services Institute, London. <https://rusi.org/publication/whitehall-reports/machine-learning-algorithms-and-police-decision-making-legal-ethical> accessed on 24 May 2022