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**ARTIFICIAL INTELLIGENCE AND POLICING: A HUMAN  
RIGHTS PERSPECTIVE**

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**ABSTRACT**

*Police forces around the world are utilizing various Artificial Intelligence systems to assist the human-decision processes. There are several human rights concerns that are being raised with increasing deployment of AI systems in different sectors. It is pertinent to understand that embracing AI in policing will have different and far severe consequences to human rights due to the inherent power of police to detain, arrest or sometimes even use deadly force.*

*Governments around the world are formulating AI strategies for governance and administration without due consideration over their impact on human rights. Undoubtedly, technology has to be utilized for efficiency in every sector, including policing, but there is an urgent need to understand the ramifications of the use of AI and to make policies to eliminate the harm caused by it. The risk assessment is to be done prior to the implementation of these intrusive AI tools. The author will discuss the various implications on human rights due to the use of AI in policing and make suggestions to fill the legal lacunae present in the deployment of AI.*

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## I. INTRODUCTION

*“Without algorithmic justice, algorithmic accuracy/ technical fairness can create AI tools that are weaponized.”*

- Jay Buolamwini

The Fourth Industrial Revolution has led to the development and usage of the powerful technology of artificial intelligence [*hereinafter* referred to as “**AI**”] in our democratic societies. The intrusive nature of AI has undoubtedly raised concerns with the increasing use of this technology in public and private spaces. AI, as a technology, has the potential to bring revolutionary changes in the world. Experts have only just begun to grapple with the effects that AI can and will have in any society. Intriguingly, there is no precise definition of AI yet. The term AI was coined by John McCarthy in 1956, who defined it as “*the science and engineering of making intelligent machines*”.<sup>1</sup> Another founding scholar, Marvin Minsky defined it as “*the science of making machines do things that would require intelligence if done by men*”.<sup>2</sup> Mathias Risse defines “intelligence” as “*the ability to make predictions about the future and solve complex tasks (...) ability demonstrated by machines, in smart phones, tablets, laptops, drones, self-operating vehicles or robots that might take on tasks ranging from household support, companionship of sorts, to policing and warfare*”.<sup>3</sup>

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<sup>1</sup> John McCarthy, *What is Artificial Intelligence?* STANFORD EDUCATION (Nov 12., 2007), <http://jmc.stanford.edu/articles/whatisai/whatisai.pdf>.

<sup>2</sup> *Human Rights in the age of Artificial Intelligence*, ACCESS NOW, <https://www.accessnow.org/cms/assets/uploads/2018/11/AI-and-Human-Rights.pdf> (last visited Sept. 4, 2020) (*hereinafter* “**Human Rights & AI**”).

<sup>3</sup> Mathias Risse, *Human Rights and Artificial Intelligence. An Urgently Needed Agenda*, 41 HUM. RTS. Q. 1-16 (2019).

Broadly speaking, AI refers to machines that can mirror human reasoning while making any choice,<sup>4</sup> and thus, automate decisions that are made by people.<sup>5</sup> AI is not one technology, rather it is considered more of a field and has many subfields such as machine learning, robotics, language processing and deep learning.<sup>6</sup>

By analyzing complex data sets, AI aims to improve and assist in decision making. From companies utilizing AI for efficient managerial decisions<sup>7</sup> to judges utilizing AI to set bail bonds,<sup>8</sup> this technology is increasingly being used by both state and non-state actors. It is a powerful tool in the hands of many entities. AI technology is not free from risks. Where authoritarian regimes can misuse technology, unintended harm can be caused by AI in democratic societies as well.<sup>9</sup> To illustrate, AI can cause harm through breach of privacy, unaccountability of results and embedded bias in the system.<sup>10</sup> Governments around the world are now formulating AI strategies to introduce and include AI in different administrative and executive domains. Alarmingly, neither do these strategies discuss the

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<sup>4</sup> Eileen Donahoe & Megan Metzger, *Artificial Intelligence and Human Rights*, 30(2) J. OF DEMOCRACY 115, (2019) (*hereinafter* “**Donahoe & Metzger**”).

<sup>5</sup> Chris Smith et al., *The History of Artificial Intelligence*, UNIVERSITY OF WASHINGTON (Dec. 2006), <https://courses.cs.washington.edu/courses/csep590/06au/projects/history-ai.pdf>.

<sup>6</sup> Human Rights & AI, *supra* note 2.

<sup>7</sup> CATHY O’NEIL, *WEAPONS OF MATH DESTRUCTION*, (Penguin Publishing, 2017) (*hereinafter* “**O’Neil**”).

<sup>8</sup> *Id.*

<sup>9</sup> Donahoe & Metzger, *supra* note 4.

<sup>10</sup> Filippo Raso et al., *Artificial Intelligence & Human Rights: Opportunities & Risks*, BERKMAN KLIEN CENTER (Sept. 25, 2018), [https://cyber.harvard.edu/sites/default/files/2018-09/2018-09\\_AIHumanRightsSmall.pdf](https://cyber.harvard.edu/sites/default/files/2018-09/2018-09_AIHumanRightsSmall.pdf) (*hereinafter* “**Raso**”).

implicit harm that this technology is capable of causing, nor do they provide for any remedies for such harm. For instance, the word “*human rights*” appears only once, and only in relation to “*instituting data privacy-legal framework*” in the discussion paper released by NITI Aayog in 2018 on AI.<sup>11</sup> In their rush to use AI, many governments have not yet anticipated the implications of AI on human rights and their responsibility towards the same. AI technology is unquestionably beneficial but efforts must be taken to analyze and understand the harm that it can cause. Furthermore, remedies have to be brought in place towards such harm before implementing the technology.

## II. ARTIFICIAL INTELLIGENCE IN POLICING

Governments have witnessed the benefits of AI in various sectors, such as finance, healthcare, insurance and transport. With the rapid decline in the cost of computer processing,<sup>12</sup> they are now implementing AI strategies in policing to combat crimes and terror activities in their territories.<sup>13</sup> Many police departments around the world are already using AI softwares in predicting crimes and identifying suspicious persons.<sup>14</sup> These softwares run algorithms on large data sets to assist the police work

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<sup>11</sup> *National Strategy for Artificial Intelligence #AIForAll*, NITI AAYOG, (June 2018), [https://niti.gov.in/writereaddata/files/document\\_publication/NationalStrategy-for-AI-Discussion-Paper.pdf](https://niti.gov.in/writereaddata/files/document_publication/NationalStrategy-for-AI-Discussion-Paper.pdf).

<sup>12</sup> William Isaac, *Hope, Hype, and Fear: The Promise and Potential Pitfalls of Artificial Intelligence in Criminal Justice*, 15 OHIO ST. J. CRIM. L. 543 (2018).

<sup>13</sup> WALTER L. PERRY ET AL., *PREDICTIVE POLICING THE ROLE OF CRIME FORECASTING IN LAW ENFORCEMENT OPERATIONS*, (RAND Publications, 2013).

<sup>14</sup> Elizabeth Joh, *Policing by Numbers: Big Data and the Fourth Amendment*, 89 WASH. L. REV 35 (2014).

and sometimes even replace it.<sup>15</sup> Since it is humanly impossible to work with humungous and complex data, the implementation of AI does not only increase the efficiency of police work but also provides significant insight from data and assists in tackling crime and enforcing law and order.<sup>16</sup> Today, we have databases that share information about crimes with different police departments, such as the Crime and Criminal Tracking Network and Systems as part of the Indian Digital Police initiative.<sup>17</sup> Further, we have also developed software that can predict crimes, such as the CompStat software used by New York City Police Department in United States of America,<sup>18</sup> and technology that can be used for facial recognition, like the CCTV surveillance system deployed in Pembrokeshire in the United Kingdom.<sup>19</sup> We are witnessing an increase in the use of AI in policing. At times, this efficiency comes at the cost of undermining human rights, and this is a cost that we as a society may not be willing to pay.

### **A. PREDICTIVE POLICING**

Understaffed and budget-strapped police departments have started utilizing AI systems that can assist in the prediction of crimes. For instance, the PredPol software, implemented by the Reading Police Department,

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<sup>15</sup> Elizabeth Joh, *Artificial Intelligence and Policing: First Questions*, 41 SEATTLE U. L. REV. 1139 (2018).

<sup>16</sup> *Id.*

<sup>17</sup> *Crime and Criminal Tracking Network & Systems (CCTNS)*, DIGITAL INDIA INITIATIVES (Apr. 29, 2019), <https://digitalindia.gov.in/content/crime-and-criminal-tracking-network-systems-cctns>.

<sup>18</sup> New York City Police Department, *Crime Statistics*, NYC, <https://www1.nyc.gov/site/nypd/stats/crime-statistics/compstat.page> (last visited Sept. 4, 2020).

<sup>19</sup> David Grundy, *Planned Dyfed-Powys Police CCTV Switch On in Early 2018*, BBC (Aug. 2017), <https://www.bbc.com/news/uk-wales-south-west-wales-40930112>.

Pennsylvania collects and processes historical crime data and predicts by calculating where crimes were most likely to occur.<sup>20</sup> With such predictions in hand, the police department can take decisions to increase patrolling in such geographical areas which would ultimately lead to a reduction in crimes.<sup>21</sup> The predictive programs also classify suspects at a low, medium or high risk of recidivism in future by gathering and calculating historical offence data, an example of which is the HART (*abbreviated* for Harm Assessment Risk Tool) utilized by the Durham Police Department in the United Kingdom.<sup>22</sup> These AI programs base their predictions on evidence led assumption that the crimes would re-occur at the same geographical areas or would be repeated by the same offenders. This greatly increases the efficiency of the police in tackling crimes in their jurisdictions.

## **B. FACIAL RECOGNITION**

The next major AI program used in policing is the Facial Recognition Technology [*hereinafter* referred to as “**FRT**”]. FRT is a subfield in pattern recognition research and technology, and uses statistical techniques to detect and extract patterns. In this case, a set of discernible pixel-level patterns.<sup>23</sup> FRT allows automatic identification of an individual

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<sup>20</sup> O’neil, *supra* note 7.

<sup>21</sup> *Id.*

<sup>22</sup> Chris Baraniuk, *Durham Police AI to help with custody decisions*, BBC News (May 10, 2017), <https://www.bbc.com/news/technology-39857645>.

<sup>23</sup> Lucas Introna & Helen Nissenbaum, *Facial Recognition Technology: A Survey of Policy and Implementation Issue*, LANCASTER UNIVERSITY WORKING PAPER (2009), [http://www.research.lancs.ac.uk/portal/en/publications/facial-recognition-technology-a-survey-of-policy-and-implementation-issues\(43367675-c8b9-464490f286815cc8ea15\).html](http://www.research.lancs.ac.uk/portal/en/publications/facial-recognition-technology-a-survey-of-policy-and-implementation-issues(43367675-c8b9-464490f286815cc8ea15).html).

by matching two or more faces from digital images.<sup>24</sup> FRT compares any footage that has been obtained from video cameras (drone cameras or CCTVs) against the database of facial images. Several governments have installed<sup>25</sup> or are in the process of installing<sup>26</sup> numerous cameras in public spaces in order to identify and penalize criminals. FRT is also used as a powerful tool to help identify and find missing persons.<sup>27</sup> Numerous law enforcement departments are also experimenting with live facial recognition - a technology that detects and identifies persons of interest in real-time.<sup>28</sup> This AI program is a revolutionary change in policing and has given wide powers to law enforcement agencies to detect, identify, and apprehend persons who may be suspected of committing a crime.

### **C. PRE-TRIAL RELEASE AND PAROLE**

AI is used in the criminal justice system during the pre-trial phase and to determine the terms of parole for an offender. These AI systems assess the risk of flight of an accused, and whether an offender should be

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<sup>24</sup> *Facial Recognition Technology: Fundamental Rights Considerations in the context of Law Enforcement*, FRA FOCUS PAPER, EUROPEAN UNION AGENCY FOR FUNDAMENTAL RTS. (2019), [https://fra.europa.eu/sites/default/files/fra\\_uploads/fra-2019-facial-recognition-technology-focus-paper-1\\_en.pdf](https://fra.europa.eu/sites/default/files/fra_uploads/fra-2019-facial-recognition-technology-focus-paper-1_en.pdf) (*hereinafter* “FRA”).

<sup>25</sup> Emily Feng, *How China is using Facial Recognition Technology*, NPR NEWS BEIJING, (Dec. 16, 2019), <https://www.npr.org/2019/12/16/788597818/how-china-is-using-facial-recognition-technology>.

<sup>26</sup> Reuters News Agency, *Privacy concerns as India readies facial recognition system*, ALJAZEERA (Nov. 08, 2019), <https://www.aljazeera.com/news/2019/11/privacy-concerns-india-readies-facial-recognition-system-191107152951428.html>.

<sup>27</sup> Kathleen Walch, *The Growth of AI adoption in Law Enforcement*, FORBES (Jul. 26, 2019), <https://www.forbes.com/sites/cognitiveworld/2019/07/26/the-growth-of-ai-adoption-in-law-enforcement/#6ab8bf70435d>.

<sup>28</sup> Kelvin Chan, *UK police use of facial recognition tests public's tolerance*, ABC NEWS (Jan. 2020) <https://abcnews.go.com/Technology/wireStory/uk-police-facial-recognition-tests-publics-tolerance-68321764>.

released on parole by analyzing complex data sets. These data sets are created using historical data like crime data, as well as, personal information gathered from an individual.<sup>29</sup> For instance, the US Criminal Justice System uses COMPAS (*abbreviated* for Correctional Offender Management Profiling for Alternative Sanctions) for basic risk assessment to determine the terms of parole for an individual.<sup>30</sup> These systems assist in efficient and quick decision making in the courts of law.

AI promises that the assistance it provides is more efficient than humans as this technology is free from any human errors. However, further reading reveals that this promise has rather morphed into a nightmare for the human rights regime.

### III. A HUMAN RIGHTS PERSPECTIVE

The growth of AI along with implementing the technology in core areas has been so rapid that the laws have lagged behind. This technology is being created and utilized without analysing and understanding its effects on human rights. One can argue that the opaqueness and complexity of the technology have rather become a veil behind which results are given authoritative backing. Lack of digital literacy and the inability to question the results of this AI technology has raised numerous issues pertaining to

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<sup>29</sup> Daniel Faggella, *AI for Crime Prevention and Detection*, EMERJ (Feb. 02, 2019), <https://emerj.com/ai-sector-overviews/ai-crime-prevention-5-current-applications/>.

<sup>30</sup> *Id.*

human rights.<sup>31</sup> AI has given a tool, so powerful, in the hands of states that total surveillance states are no more a work of fiction. The over-reliance on this technology without appropriate remedial measures has led to many human rights and technology groups demanding changes in law at the global level.<sup>32</sup> These groups are working tirelessly to bring up the human rights violations that are impliedly associated with this technology. Interestingly, these violations are not nation specific but rather technology specific, and hence, one can correctly presume that if a technology is violating human rights in nation 'A', the same technology when utilized in nation 'B' will have the same results. Therefore, the need of the hour is to understand how this technology violates the fundamental human rights and what measures should be taken to tackle the same so that the benefits of the technology can be maximized.

One has to understand that the implications of the use of AI in policing are vastly different due to the inherent powers of the police to detain, arrest and even use deadly force in certain circumstances. This rationalises the concerns being raised globally against the use of AI in policing. Unchecked AI in law enforcement can become tools in the hands of authoritarian regimes to undermine human rights, and this implies that the use of AI in policing has to be scrutinized to a higher degree as compared to any other sector.

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<sup>31</sup> Laura Stanila, *Artificial Intelligence and Human Rights: A Challenging Approach on the Issue of Equality*, J. E. EUROPEAN CRIM. L. 19 (2018).

<sup>32</sup> Toronto Declaration on Protecting the Rights to Equality and Non-Discrimination in Machine Learning Systems, (2018), [https://www.accessnow.org/cms/assets/uploads/2018/08/The-Toronto-Declaration\\_ENG\\_08-2018.pdf](https://www.accessnow.org/cms/assets/uploads/2018/08/The-Toronto-Declaration_ENG_08-2018.pdf).

### **A. DISCRIMINATION: THE EMBEDDED BIASNESS**

The foremost risk that AI presents is the discrimination that perpetuates due to biased algorithm. AI tech developers have always argued that as the algorithm works on data, it is beyond any human bias and thus, the results are absolutely unbiased and do not lead to any kind of discrimination.<sup>33</sup> This argument has now been refuted by many international human rights and technology groups.<sup>34</sup> AI inherently carries with itself the risk of perpetuating and amplifying the existing social biases. The reason behind this is the data, as AI systems are trained to analyse and then replicate the pattern that they learn from the data.<sup>35</sup> Herein lays the problem – when AI replicates the past pattern, it will inherently perpetuate the existing social biases as well.<sup>36</sup> This will consequently result into what is popularly called data bias. Unfortunately, biased data is the rule rather than an exception, which leads to perpetuating and amplifying the biasness in the society.<sup>37</sup>

As far as AI systems that are predictive in nature are concerned, there are two kinds of such crime prediction systems at present. *First*, which identifies the geographical area where crimes are likely to occur. *Second*, which predicts individuals that are likely to commit crime. For instance, the

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<sup>33</sup> O'neil, *supra* note 7.

<sup>34</sup> Anna Bacciarelli, *Artificial intelligence: the technology that threatens to overhaul our rights*, AMNESTY INTERNATIONAL (June 2017), <https://www.amnesty.org/en/latest/research/2017/06/artificial-intelligence-the-technology-that-threatens-to-overhaul-our-rights/>.

<sup>35</sup> Erini Ntoutsi et al., *Bias in data-driven artificial intelligence systems—An introductory survey*, 10(3) WIREs DATA MINING KNOWL DISCOV. 1-14 (2020).

<sup>36</sup> Raso, *supra* note 10.

<sup>37</sup> Human Rights & AI, *supra* note 2.

PredPol and HART predictive software used by police departments utilize historical data of past crimes and then, by analysing the pattern, provide prediction to police.<sup>38</sup> Critics argue that this data is already biased because, historically, the police is more likely to target the minority population. The biasness that is perpetuated against African-Americans in the USA can illustrate this point. The USA policing system has historically been racist, and police data show that African-Americans are more likely to be stopped by police and police is more likely to use force against them.<sup>39</sup> Furthermore, African-Americans are charged<sup>40</sup> and incarcerated at a higher rate as compared to the Whites.<sup>41</sup> Such criminal records feed the data needs of the AI system and create a pernicious feedback loop which results in stigmatising individuals and groups.<sup>42</sup> Such neighbourhoods and such individuals are now at the risk of being flagged as high risk compared to another neighbourhood or individual against whom such historical data is unavailable. The effect of high incarceration and this data impacts the

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<sup>38</sup> Ellen Huet, *Server and protect: predictive policing firm PredPol promise to map crime before it happens*, FORBES (Mar. 02, 2015), <https://www.forbes.com/sites/ellenhuet/2015/02/11/predpol-predictive-policing/#3cad3f1c4f9b>.

<sup>39</sup> Darwin Bong Graham, *Black people in California are stopped far more often by police, major study proves*, THE GUARDIAN (Jan. 03, 2020), <https://www.theguardian.com/us-news/2020/jan/02/california-police-black-stops-force>.

<sup>40</sup> Timothy Williams, *Black People Are Charged at a Higher Rate Than Whites. What If Prosecutors Didn't Know Their Race?*, THE NEW YORK TIMES (June 12, 2019), <https://www.nytimes.com/2019/06/12/us/prosecutor-race-blind-charging.html>.

<sup>41</sup> Ashley Nellis, *The colour of justice: Racial and ethical disparity in State prisons*, THE SENTENCING PROJECT (June 14, 2016), <https://www.sentencingproject.org/publications/color-of-justice-racial-and-ethnic-disparity-in-state-prisons/>.

<sup>42</sup> Albert Meljer & Martijn Wessels, *Predictive Policing: Review of Benefits and Drawbacks*, 42(12) INTER. J. OF PUBLIC ADMINISTRATION, 1031-1039 (2019).

economic opportunities available to such groups<sup>43</sup> and leads to high recidivism due to the social, cultural and economic circumstances.<sup>44</sup>

The criminal justice system has also started utilising AI for pre-trial release and parole granting. COMPAS is one such AI being utilized by many courts in the US. This software again relies on the historical data and like predictive policing programs, the historical data is also biased, which in turn leads the AI to perpetuate this biasness further.<sup>45</sup> ProPublica, a non-profit investigative news reporter, found this software discriminating against the African-Americans and misclassifying them as “high risk” at twice the rate of Caucasians.<sup>46</sup>

It is important to note here that the criminal justice system comprising of police departments and courts is the most potent institution through which the democratic nations restrict a person’s enjoyment of human rights. AI is likely to have a positive impact in ensuring that this system is saved, from any human bias, which will also have a significant positive impact on the society as a whole.<sup>47</sup> However, we have seen that the biasness of algorithms is the rule rather than an exception and this infringes the right to equality guaranteed to every human under the International Bill

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<sup>43</sup> *Criminal Justice Fact Sheet*, NAACP, <https://www.naacp.org/criminal-justice-fact-sheet/>.

<sup>44</sup> Randy Rieland, *Artificial Intelligence is now used to predict crime. But is it biased?*, SMITHSONIAN MAGAZINE, (Mar. 05, 2018), <https://www.smithsonianmag.com/innovation/artificial-intelligence-is-now-used-predict-crime-is-it-biased-180968337/>.

<sup>45</sup> Julia Angwin et al., *Machine Bias*, PROPUBLICA (May 23, 2016), <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing> (*hereinafter* “ProPublica”).

<sup>46</sup> *Id.*

<sup>47</sup> Raso, *supra* note 10.

of Human Rights, as well as, under the constitutions of the majority of nations.<sup>48</sup> When police departments and courts are allowed to rely on the biased decisions of AI, they infringe the right of a person to be treated equally with every other citizen.<sup>49</sup>

Democratic societies work on the basis of the principle ‘innocent until proven guilty’ but biased AI systems flag people as “*high risk*” due to the historical data and thereby it goes against the basic tenet of our criminal justice system. It is now being argued that the use of AI infringes the right of an accused for a free and fair trial.

The AI algorithms are firstly protected under the intellectual property regime which makes it impossible for an accused to question or challenge the results.<sup>50</sup> This ‘black-box’ paradox creates an opaque and complex system.<sup>51</sup> Moreover, for these AI algorithms to work the software has to deal in big data sets that are created using many parameters that might not have a direct correlation with the crime that one is accused of.<sup>52</sup> This results in undermining the transparency and fairness in the decision making and infringement of the right to a fair trial.<sup>53</sup> Furthermore, due to the ‘black-box’ paradox, the person relying on results of these AI tools may

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<sup>48</sup> *Id.*

<sup>49</sup> ProPublica, *supra* note 45.

<sup>50</sup> Robert Brauneis & Ellen P. Goodman, *Algorithmic Transparency for the Smart City*, 20 YALE J.L. & TECH. 103 (2018).

<sup>51</sup> Yavar Bathaee, *The Artificial Intelligence Black Box and the failure of intent and causation*, 31(2) HARV. JOUR. OF L.& TECH. (2018).

<sup>52</sup> O’neil, *supra* note 7.

<sup>53</sup> Donahoe & Metzger, *supra* note 4.

not even understand the basis on which the algorithm makes its decisions, which when relied upon is arbitrary.<sup>54</sup>

Another human right that we have secured is freedom from arbitrary arrest and detention. However, when the police or courts rely on some AI systems to analyse data and accordingly classify a person, it may be argued that, that it is arbitrary.<sup>55</sup> Human Rights Watch has recently reported that China's predictive policing is enabling officials to arbitrarily detain people in Xinjiang.<sup>56</sup> In a case of the Wisconsin Supreme Court in the United States,<sup>57</sup> the petitioner claimed that his right to due process was violated as the court had employed the COMPAS software for risk assessment. Though the Supreme Court ruled in favour of the State, interestingly the judges held that appropriate warning needs to be given before courts employ such predictive tools. The court further concluded that "*constitutional concerns required it to 'circumscribe' the use of the COMPAS risk assessment at sentencing*" and stressed that "*the risk scores may not be used as the determinative factor*". After concerns were raised about the biasness and algorithms of these predictive tools, a sentencing commission has been formed by the Department of Justice of the United States to study the risk assessment tools and their proper role in the criminal justice system.<sup>58</sup>

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<sup>54</sup> Raso, *supra* note 10.

<sup>55</sup> Karen Hao, *AI is sending people to jail-and getting it wrong*, MIT TECH. REV. (Jan. 21, 2019), <https://www.technologyreview.com/2019/01/21/137783/algorithms-criminal-justice-ai/>.

<sup>56</sup> Maya Wang, *China: Big data fuels crackdown in minority region*, HUMAN RTS. WATCH (Feb. 26, 2018), <https://www.hrw.org/news/2018/02/26/china-big-data-fuels-crackdown-minority-region>.

<sup>57</sup> *State v. Loomis*, 881 N.W.2d 749 (Wis. 2016).

<sup>58</sup> *Loomis v. State of Wisconsin*, 137 S.Ct. 2290 (2017).

This leads us to another question on the accountability of such systems. Who do we hold accountable when the police or courts rely on a system that is supposed to be unbiased and works purely on data rather than any human bias or emotion? When there is an over-reliance on AI, it involves a loss of respect for human rights, fairness and transparency in name of effectiveness.<sup>59</sup>

With one of the worst police to person ratio in the world,<sup>60</sup> AI is providing a rather miraculous solution to India.<sup>61</sup> AI has made inroads in the Indian police department. Various state police are now armed with AI tools. The Rajasthan police department has tested an AI based app-ABHED in their criminal investigations.<sup>62</sup> The Uttar Pradesh police department is now utilising the app 'Trinetra' to track criminals.<sup>63</sup> The Andhra Pradesh government has launched its AI platform e-Pragati which

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<sup>59</sup> *Artificial Intelligence in Society*, OECD (June 11, 2019), [https://www.oecd-ilibrary.org/sites/eedfee77en/1/2/1/index.html?itemId=/content/publication/eedfee77en&\\_csp\\_=5c39a73676a331d76fa56f36ff0d4aca&itemIGO=oecd&itemContentType=book](https://www.oecd-ilibrary.org/sites/eedfee77en/1/2/1/index.html?itemId=/content/publication/eedfee77en&_csp_=5c39a73676a331d76fa56f36ff0d4aca&itemIGO=oecd&itemContentType=book) (*hereinafter* "OECD").

<sup>60</sup> Sriharsha Devulapalli & Vishnu Padmanabhan, *India's police force among the world's weakest*, LIVE MINT (June 19, 2019), <https://www.livemint.com/news/india/india-s-police-force-among-the-world-s-weakest-1560925355383.html>.

<sup>61</sup> Vikram Sharma, *Indian Police to be armed with big data software to predict crime*, THE NEW INDIAN EXPRESS (Sept. 23, 2018), <https://www.newindianexpress.com/nation/2017/sep/23/indian-police-to-be-armed-with-big-data-software-to-predict-crime-1661708.html>.

<sup>62</sup> IANS, *Alwar police testing AI-based app to register criminal offences*, BUSINESS STANDARD (May 29, 2017), <https://www.business-standard.com/article/news-ians/alwar-police-testing-ai-based-app-to-register-criminal-offences-1170529011711.html>.

<sup>63</sup> *Now, UP police to use criminal tracker 'Trinetra' app*, HINDUSTAN TIMES (Dec. 28, 2018), <https://www.hindustantimes.com/lucknow/now-up-police-to-use-criminal-tracker-trinetra-app/story-Hm9S8Sw83oxYfM1j2SdH4M.html>.

integrates information across the government departments.<sup>64</sup> The Delhi police is now using CMAPS to identify crime hotspots.<sup>65</sup>

Unfortunately, if AI is implemented without providing for a procedure to establish transparency and robustness in the system, we can expect similar results in India due to the biased system. India has an opportunity to turn this nightmare operation into an effective system if it learns lessons from other nations that have failed to safeguard human rights in their jurisdiction. In the United Kingdom, the West Midlands police's ethics committee has raised concerns over privacy and implicit police bias. The project NDAS utilises data on 'stop and search' which as noted by the ethics committee would also include information about people who were stopped but nothing was found with/on them.<sup>66</sup> In the United States, investigations have proved the racial bias of the system.<sup>67</sup> In China's Xinjiang, where 1.8 million Uighurs are detained, predictive tolls are used to constantly surveil the population.<sup>68</sup>

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<sup>64</sup> Naidu launches e-Pragati core platform, THE HINDU (July 28, 2018), <https://www.thehindu.com/news/national/andhra-pradesh/naidu-launches-e-pragati-core-platform/artic1e24465768.ece>.

<sup>65</sup> Karn Singh, *Preventing crime before it happens: How data is helping Delhi Police*, HINDUSTAN TIMES (Feb. 28, 2017), <https://www.hindustantimes.com/delhi/delhi-police-is-using-precrime-data-analysis-to-send-its-men-to-likely-trouble-spots/story-hZcCRyWMVoNSsRhBNgOHI.html>.

<sup>66</sup> Sarah Marsh, *Ethics committee raises alarm over 'predictive policing' tool*, THE GUARDIAN (Apr. 20, 2019), <https://www.theguardian.com/uk-news/2019/apr/20/predictive-policing-tool-could-entrench-bias-ethics-committee-warns>.

<sup>67</sup> ProPublica, *supra* note 45.

<sup>68</sup> Yuan Yang, *The role of AI in China's crackdown on Uighurs*, FINANCIAL TIMES (Dec. 11, 2019), <https://www.ft.com/content/e47b33ce-1add-11ea-97df-cc63de1d73f4>.

India is already facing privacy issues with its Aadhaar project.<sup>69</sup> Furthermore, bias against scheduled tribes, scheduled castes and other minorities bog down Indian criminal system.<sup>70</sup> The Andhra Pradesh government's e-Pragati is already being criticised for creating a surveillance state.<sup>71</sup> India is in the phase of developing a national strategy for AI,<sup>72</sup> and the experiences of other nations can help India in implementing a human-rights respecting AI project.

### **B. SURVEILLANCE: NOT JUST THE LOSS OF PRIVACY**

The next potent AI technology is the FRT. Around the world, countries are in the process of installing CCTVs to facilitate FRT in their territories. FRT is actively being used by the law enforcement agencies at various places and has been deployed at the border to surveil migrants, at airports to monitor commuters, and in cities to monitor citizens.<sup>73</sup> FRT aims at assisting the police to compare and identify a person based on his digital image. However, the mass surveillance program implemented by

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<sup>69</sup> Sandeep Shukla, *Aadhaar verdict: Why privacy still remains a central challenge*, THE ECONOMIC TIMES (Sep. 27, 2018), <https://economictimes.indiatimes.com/news/politics-and-nation/aadhaar-verdict-why-privacy-still-remains-a-central-challenge/articleshow/65970934.cms?from=mdr>.

<sup>70</sup> Maja Daruwala, *Fair and unbiased policing still a far cry in India*, THE WIRE (June 04, 2018), <https://thewire.in/society/fair-and-unbiased-policing-still-a-far-cry-in-india>.

<sup>71</sup> Gopal Sathe, *How Andhra Pradesh built India's first police state using Aadhaar and a census*, HUFFINGTON POST (July 23, 2018), [https://www.huffingtonpost.in/2018/07/23/how-andhra-pradesh-built-indias-first-police-state-using-aadhaar-and-a-census\\_a\\_23487838/](https://www.huffingtonpost.in/2018/07/23/how-andhra-pradesh-built-indias-first-police-state-using-aadhaar-and-a-census_a_23487838/).

<sup>72</sup> *National Strategy for Artificial Intelligence #AIForAll*, NITI AAYOG, (June 2018), [https://niti.gov.in/writereaddata/files/document\\_publication/NationalStrategy-for-AI-Discussion-Paper.pdf](https://niti.gov.in/writereaddata/files/document_publication/NationalStrategy-for-AI-Discussion-Paper.pdf).

<sup>73</sup> Shirin Ghaffary & Rani Molla, *Here's where the US government is using facial recognition technology to surveil Americans*, VOX (Dec. 10, 2019), <https://www.vox.com/recode/2019/7/18/20698307/facial-recognition-technology-us-government-fight-for-the-future>.

People's Republic of China through large scale use of FRT by installing CCTVs has led to many discussions over the human rights violation in China, particularly in profiling certain ethnic minorities.<sup>74</sup> These claims are not unfounded as with FRT, law enforcement agencies have a tool in its hands through which it can easily monitor and profile any individual or group. These concerns have also been raised in 2019 by Special Rapporteur to the United Nations Human Rights Council.<sup>75</sup>

*First*, there are concerns about the accuracy of the technology. FRT has been proven to inaccurately identify people.<sup>76</sup> An American federal study has confirmed the racial bias present in the FRT.<sup>77</sup> The bias is embedded in the technology due to the lack of diversified data. This again leads to discrimination and violation of human rights.

The next concern relates to discriminatory profiling. FRT can be utilized not just to surveil but also identify and subsequently target certain communities. Such profiling, at first instance, can be a tool in the hand of an authoritarian regime to systematically discriminate against certain

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<sup>74</sup> Simon Denyer, *China's watchful eye*, THE WASHINGTON POST (Jan. 07, 2018), <https://www.washingtonpost.com/news/world/wp/2018/01/07/feature/in-china-facial-recognition-is-sharp-end-of-a-drive-for-total-surveillance/>.

<sup>75</sup> *Surveillance and human rights: Report of Special Rapporteur on promotion and protection of the rights of Freedom of Opinion and Expression*, Human Rights Council, A/HRC/41/35 (2019), <https://digitallibrary.un.org/record/3814512?ln=en>.

<sup>76</sup> Matthew Wall, *Biased and wrong? Facial recognition tech in the dock*, BBC (July 08, 2019), <https://www.bbc.com/news/business-48842750>.

<sup>77</sup> Drew Harwell, *Federal study confirms racial bias of many facial-recognition system, casts doubts on their expanding use*, WASHINGTON POST (Dec. 20, 2019), <https://www.washingtonpost.com/technology/2019/12/19/federal-study-confirms-racial-bias-many-facial-recognition-systems-casts-doubt-their-expanding-use/>.

communities. Simultaneously, it may also interfere with the freedom of expression and freedom of association and assembly. These fundamental rights are actively utilized by citizens while expecting a reasonable level of anonymity. People may be discouraged from voicing their opinions and demonstrating or participating in any assembly due to the fear of being identified and targeted for exercising such rights.<sup>78</sup>

The major concern relates to the loss of privacy. The right to privacy is essential to human dignity. It includes both a legitimate expectation to respect private life as well as private data. The term 'private life' is not susceptible to an exhaustive definition but embraces multiple aspects of a person's social identity.<sup>79</sup> The ease of surveillance through FRT and subsequent loss of privacy often leads to infringement of other fundamental rights such as freedom of expression and association. Implementing and utilizing of FRT leads to unreasonable searches and maybe even subsequent arrests, leading to the infringement of the right to privacy.<sup>80</sup> FRT involves biometric processing of facial images.<sup>81</sup> These images may be taken in public places and can subsequently be saved in

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<sup>78</sup> FRA, *supra* note 24.

<sup>79</sup> *Id.* at 23.

<sup>80</sup> Kristine Hamann & Rachel Smith, *Facial Recognition Technology: Where will it take us?*, AMERICAN BAR ASSOCIATION (2019), [https://www.americanbar.org/groups/criminal\\_justice/publications/criminal-justicemagazine/2019/spring/facial-recognitiontechnology/](https://www.americanbar.org/groups/criminal_justice/publications/criminal-justicemagazine/2019/spring/facial-recognitiontechnology/).

<sup>81</sup> Joss Fong, *What facial recognition steals from us*, VOX (Dec. 10, 2019), <https://www.vox.com/recode/2019/12/10/21003466/facial-recognition-anonymity-explained-video>.

databases that can be utilized later for identification purposes.<sup>82</sup> Such retention and utilization of biometric data infringe a person's right to privacy as well as the right to protect personal data.<sup>83</sup> When we talk about the protection of personal data, AI systems are trained to access and analyze big data sets. FRT creates a databank of personal biometrics data without the consent of a person.<sup>84</sup> This data, in the absence of stringent protection laws, can be misused by the AI systems.

Facial recognition system has already been deployed by various states in India. Punjab police department has deployed its AI powered FRT – PAIS.<sup>85</sup> The Indian government has rolled out a nationwide Automated Facial Recognition System [*hereinafter* referred to as “**AFRS**”] and the National Crime Records Bureau [*hereinafter* referred to as “**NCRB**”] has been authorised to implement AFRS.<sup>86</sup> NCRB had opened bids for private

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<sup>82</sup> Prasad Banerjee, *Success of facial recognition depends on data*, LIVE MINT (Jan. 02, 2020), <https://www.livemint.com/technology/tech-news/success-of-facial-recognition-tech-depends-on-data-11577986675080.html>.

<sup>83</sup> FRA, *supra* note 24.

<sup>84</sup> Jon Schuppe, *Facial Recognition gives police a powerful new tracking tool. It's also raising alarms*, NBC NEWS (July 30, 2018), <https://www.nbcnews.com/news/us-news/facial-recognition-gives-police-powerful-new-tracking-tool-it-s-n894936>.

<sup>85</sup> Gopal Sathe, *Cops in India are using artificial intelligence that can identify you in a crowd*, HUFFPOST (Aug. 16, 2018), [https://www.huffingtonpost.in/2018/08/15/facial-recognition-ai-is-shaking-up-criminals-in-punjab-but-should-you-worry-too\\_a\\_23502796/?guccounter=1&guce\\_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLnNvbS8&guc\\_e\\_referrer\\_sig=AQAAAETdQnufGIWrQvbsIKkXqIX0pIz7OcRbOoqWqE2EtHN0mrdhJpBq5ICDiKfVW4LVpQ76Jd7Y8CE5kjhtY7cg634bIZdRjA-Rm2vE9Yhl fGsBn1UuQ7pQOJcGH94Dksygi8-u8qli6j9AYIWSUNR0CNUUp6PJYCrL0 2a71Ezhq7XTF](https://www.huffingtonpost.in/2018/08/15/facial-recognition-ai-is-shaking-up-criminals-in-punjab-but-should-you-worry-too_a_23502796/?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLnNvbS8&guc_e_referrer_sig=AQAAAETdQnufGIWrQvbsIKkXqIX0pIz7OcRbOoqWqE2EtHN0mrdhJpBq5ICDiKfVW4LVpQ76Jd7Y8CE5kjhtY7cg634bIZdRjA-Rm2vE9Yhl fGsBn1UuQ7pQOJcGH94Dksygi8-u8qli6j9AYIWSUNR0CNUUp6PJYCrL0 2a71Ezhq7XTF).

<sup>86</sup> Bharti Jain, *NCBR authorised to use facial recognition to track criminals, MHA informs Rajya Sabha*, THE TIMES OF INDIA (Mar. 04, 2020), <https://timesofindia.indiatimes.com/india/ncrb-authorized-to-use-facial-recognition-to-track-criminals-mha-informs-rajya-sabha/articleshow/74481284.cms> (*hereinafter* “**Bharti Jain**”).

companies to develop this FRT in the country.<sup>87</sup> Critics argue that this would be the world's biggest facial recognition system.<sup>88</sup> Apart from concerns over privacy, this move can effectively make India, a surveillance state. It is important to note here that there has been no statute passed by the Parliament for implementing AFRS. NCRB claims that a Cabinet Note of 2009 legalises this step but a Cabinet Note is not a law passed by the Parliament.<sup>89</sup>

India as of now, does not have a data protection law, which makes this technology even riskier to be implemented. The Personal Data Protection bill that was introduced in the Parliament<sup>90</sup> is already being heavily criticised. The bill allows the government to exempt any of its agencies from the requirements of this legislation,<sup>91</sup> and allows it to decide what safeguards would apply to their use of data.<sup>92</sup> These provisions will arguably constitute a new source of power for national security agencies to conduct surveillance.<sup>93</sup> India already allows surveillance through various

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<sup>87</sup> *Request for proposal to procure national automated facial recognition system*, NCRB, MINISTRY OF HOME AFFAIRS, GOVERNMENT OF INDIA (2019), <https://ncrb.gov.in/sites/default/files/tender/AFRSRFPDae2206220UploadedVersion.pdf>.

<sup>88</sup> Julie Zaugg, *India is trying to build the world's biggest facial recognition system*, CNN BUSINESS (Oct. 18, 2019), <https://edition.cnn.com/2019/10/17/tech/india-facial-recognition-intl-hnk/index.html>.

<sup>89</sup> *NCRB finally responds to legal notice on facial recognition, we promptly send a rejoinder*, INTERNET FREEDOM FOUNDATION (Nov. 08, 2019), <https://internetfreedom.in/the-ncrb-responds/>.

<sup>90</sup> The Personal Data Protection Bill, No. 373 of 2019 (India).

<sup>91</sup> *Id.* Chapter VIII, cl. 35.

<sup>92</sup> Bharti Jain, *supra* note 85.

<sup>93</sup> Anirudh Burman, *Will India's proposed Data Protection Law Protect Privacy and Promote Growth?*, CARNEGIE INDIA (Mar. 09, 2020), <https://carnegieindia.org/2020/03/09/will-india-s-proposed-data-protection-law-protect-privacy-and-promote-growth-pub-81217>.

laws, such as the Indian Telegraph Act<sup>94</sup> and the Information Technology Act.<sup>95</sup> Deploying an intrusive technology such as AFRS will certainly increase the state of surveillance in India and infringe the right to privacy guaranteed by the Indian constitution.<sup>96</sup>

#### IV. SAFEGUARDING HUMAN RIGHTS

AI is a revolutionising technology which has the potential to assist in economic as well as social growth. While it holds enormous power to benefit humanity, the technology has to be trained to respect human rights.<sup>97</sup> We cannot have tunnel vision when it comes to AI and we need to be proactive to maximize the benefits of this technology while safeguarding our fundamental rights against the abuse. Contemplations for developing ethical AI have already begun. The European Commission has issued guidelines for the development of ethical AI.<sup>98</sup> The guidelines aim to promote a structure of trustworthy AI which has three components: (i) AI should be lawful (ii) AI should be ethical and (iii) AI should be robust.<sup>99</sup> Although these guidelines are not legally binding, they are an important step

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<sup>94</sup> The Indian Telegraph Act, No. 13 of 1885 (India).

<sup>95</sup> The Information Technology Act, No. 21 of 2000 (India), Vipul Kharbhandha, *Policy paper on surveillance in India*, THE CENTRE FOR INTERNET & SOCIETY (Aug. 03, 2015), <https://cis-india.org/internet-governance/blog/policy-paper-on-surveillance-in-india>.

<sup>96</sup> Justice K.S. Puttaswamy (Retd.) v. Union of India, (2017) 10 SCC 1 (India).

<sup>97</sup> OECD, *supra* note 59.

<sup>98</sup> High-Level Expert Group on Artificial Intelligence, *Ethics Guidelines for Trustworthy AI*, EUROPEAN COMMISSION (April 2019), <https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai>.

<sup>99</sup> *Id.* at 2.

forward. The following could be a few steps that can be taken to ensure that we safeguard human rights:<sup>100</sup>

- Every nation should establish a legal framework which would carry out a human rights impact assessment on the AI system before they are developed/acquired or deployed. Along-with such assessment it should be ensured that the users are AI-literate and are be able to understand and interact with the system.<sup>101</sup>
- AI systems should be deployed with human oversight. A machine should not be given the power to make decisions, and the system should always have human oversight. Human intervention and monitoring should be carried out at every stage of AI system. This will ensure that the AI systems work in a regulated framework and respect human rights.<sup>102</sup>
- A comprehensive data protection legislation that can anticipate, mitigate and provide remedies for any human rights risks should be enforced. AI accesses personal data and such legislation should provide for a citizen's right to own their data and subsequent requirement for consent to access such data.

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<sup>100</sup> *Unboxing Artificial Intelligence: 10 steps to protect Human Rights*, COUNCIL OF EUROPE COMMISSIONER FOR HUMAN RTS. (May 2019), <https://rm.coe.int/unboxing-artificial-intelligence-10-steps-to-%20protect-human-rights-reco/1680946e64>.

<sup>101</sup> *EU guidelines on ethics in artificial intelligence: context and implementation*, EUROPEAN PARLIAMENT (Sept. 2019), [https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/640163/EPRS\\_BRI\(2019\)640163\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/640163/EPRS_BRI(2019)640163_EN.pdf) (*hereinafter* “**EU Guidelines**”).

<sup>102</sup> *Id.* at 16.

The legislature has to define narrowly the legitimate purposes when such data can be accessed.<sup>103</sup>

- There is a need to build a transparent information system. The public must have knowledge and information on the deployment of such systems. Furthermore, the results of such systems have to be made transparent where an individual understands how such a decision was reached and verified.<sup>104</sup>
- Every person who has been impacted by any AI-related decision should have the recourse to challenge the same. This requires the nations to establish independent agencies that have the power to investigate and adjudicate such matters.<sup>105</sup>
- Discrimination due to embedded biasness has to be prevented. Data diversity has to be ensured with strict non-tolerance to any AI system that perpetuates bias. Framework for due diligence should be created and human rights impact assessments should be carried out regularly.
- The UN Guiding Principles on Business and Human Rights should be implemented. These guidelines provide for businesses to prevent, address and remedy any human rights abuses committed in their operations.<sup>106</sup> This would establish a structure where the private sector will be under an obligation

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<sup>103</sup> Human Rights & AI, *supra* note 2.

<sup>104</sup> EU guidelines, *supra* note 101.

<sup>105</sup> *Id.*

<sup>106</sup> Office of the High Commissioner, *Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework*, UNITED NATIONS, HR/PUB/11/04 (2011).

to respect human rights and prevent their infringements. These principles will ensure the development of ethical AI.

- Lastly, there is a need to promote AI literacy. Implementation of AI without requisite AI literacy will lead to violations of human rights. Efforts must be taken to promote AI literacy in every institution utilizing AI.

There is an urgent need to assess the harm and mobilize resources towards the legal lacunae that exist in the AI ecosystem. Without due process of law, the AI systems will lead to disintegration of the human rights regime that has been built, painstakingly post the world wars. This technology creates new challenges and thus, requires immediate proactive actions by governments around the world to tackle and prevent such disintegration and make efforts for effective utilization of the technology for the betterment of humankind.

## V. CONCLUSION

It is essential to create a safe environment for the deployment of AI and to understand the harm before implementing this technology. For instance, the European Commission is considering a temporary ban on FRT so that regulators can get time to study and work out plans to prevent the technology from being abused.<sup>107</sup> The state of California has become

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<sup>107</sup> Daniel Boffey, *EU eyes temporary ban on facial recognition in public places*, THE GUARDIAN (Jan. 17, 2020), <https://www.theguardian.com/technology/2020/jan/17/eu-eyes-temporary-ban-on-facial-recognition-in-public-places>.

the third state to ban facial recognition software and they have banned it for next three years to protect the right to privacy of the US citizens.<sup>108</sup> Due to protests by its employees, Google has decided to not work on AI systems that could improve the target drone striking<sup>109</sup> and has issued guidelines on responsible AI.<sup>110</sup> These are a few positive steps and are welcomed.

Big tech companies such as Google and Facebook are willing to work to develop guidelines and laws for development of ethical and legal AI. There is a need to assess the impact and bring in policies to prevent the harm that this technology could unleash on the human rights regime. The technology can and will maximize the benefits only when efforts are made to minimize the damage that this intrusive technology could create.

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<sup>108</sup> *California moves to ban facial recognition on police body cameras*, ALJAZEERA, (Sept. 13, 2019), <https://www.aljazeera.com/news/2019/09/california-moves-ban-facial-recognition-police-body-cameras-190913014509067.html>.

<sup>109</sup> Scott Shane & Daisuke Wakabayashi, *'The business of war': Google employees protest work for Pentagon*, THE NEW YORK TIMES (Apr. 04, 2018), <https://www.nytimes.com/2018/04/04/technology/google-letter-ceo-pentagon-project.html>.

<sup>110</sup> Sunder Pichai, *AI at Google: Our Principles*, GOOGLE THE KEYWORD (June 07, 2018), <https://www.blog.google/technology/ai/ai-principles/>.