TECHNOLOGY AND IMMIGRATION LAW: THE ROLE OF ARTIFICIAL INTELLIGENCE IN IMMIGRATION ENFORCEMENT

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Professional Profile

Caleb Kipkoech is a dedicated legal professional with a robust academic foundation in law. He holds a Bachelor of Laws (LL.B Honours) degree from Kenyatta University and has furthered his legal education with a Postgraduate Diploma in Law, currently awaiting admission to the Bar.

Throughout his academic journey, Caleb has demonstrated a profound understanding of legal principles and practices. His expertise spans legal research, drafting, and analysis, with a particular interest in Technology law. Caleb's education has equipped him with critical thinking and problem-solving skills for effective legal practice.

Caleb is committed to applying his knowledge and skills in a professional setting. He aims to contribute to the success of a dynamic legal team and leverage his academic achievements and practical training to advocate for justice and uphold the rule of law.

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Abstract

Migration is an intrinsic part of human history. This phenomenon is informed by different motivations, ranging from seeking work or economic opportunities to studies, family reunions, escaping conflicts, or large-scale human rights violations. While some migrate out of choice, others do so out of necessity. This phenomenon's prevalence has shifted because of modernisation. Technological advances have greatly influenced the migration of people from one Country to another. The 2030 Agenda for Sustainable Development recognises the positive contribution of migrants to sustainable development and inclusive growth. The central core principle of this Agenda is the "leave no one behind" principle, which includes migrants.

The data on migration by the Population Division of the United Nations Department for Economic and Social Affairs shows that the latest estimates for 2020 show that the number of international migrants worldwide, people residing in a country other than their Country of birth, reached 281 Million. What then is the role of Artificial intelligence in immigration enforcement? Different countries have adopted various forms of artificial intelligence, including facial recognition systems at the border crossing and algorithms designed to predict the potential outcomes of asylum claims. This has consequently reduced the backlog of cases in immigration courts and agencies. However, Criticisms exist regarding the operational efficiency of Artificial Intelligence tools and the risks they pose to immigrants' privacy rights and civil liberties. Human rights concerns about privacy infringements have been raised. Thus, the governments and sectors responsible should seek to establish a regulatory framework that harnesses the potential of Artificial Intelligence while mitigating its risks.

KEYWORDS: Migration, Artificial Intelligence, Privacy

1.0 Introduction

Modern solutions and inventions are intriguing and offer great satisfaction to people globally. Different aspects of technological advancements have been witnessed in the modern day. Life would be difficult without technological advancement at this age. John McCarthy is regarded as the father of artificial intelligence and was the first to introduce it in 1956. AI is regarded as a tool that provides a 'Humanlike' approach to problems.[240] The rise of AI has seen it become a key tool in many new applications. These include software systems that respond to issues and offer appropriate solutions.[241]

The rise in technological advancement has seen a significant transformation in migration. The discovery, development, and establishment of Artificial Intelligence (AI) have positively impacted several sectors, with no exception to immigration. Technology has simplified the legal process of migration. Examples include Artificial Intelligence Chat boxes that can answer and offer solutions to common immigration-related questions.[242] AI-powered systems have also been developed to analyse and accurately represent vast data.

Artificial Intelligence is one of the most significant tests, and it has consistently proven to simplify immigration in different countries. Rachel Brandenburger suggests that we must recognise the importance of fostering a climate that encourages innovation and that technological change has significantly changed lives.[243] Among others, AI has simplified the legal process in immigration law. AI-powered systems can also extract and analyse large volumes of data for instance, in visa applications, these systems can extract important information such as personal details, employment history, and other requirements during visa reviews.

AI systems have also seen a reduction in errors and increased accuracy an advantage which has been observed in the analysis of complex immigration regulations. Systems such as Ross

[240] L Moran, 'Professor John McCarthy, Father of Artificial Intelligence, Dies Aged 84' (Daily Mail, 22nd August 2024)<http://www.dailymail.co.uk/news/article-2053617/Professor-John-McCarthyFather-artificial-intelligence-dies-aged-84.html> accessed 22nd August 2024.
[241] D L Waltz, *Artificial Intelligence: Realising the Ultimate Promises of Computing* (NEC Research Institute and the Computing Research Association 1996) <http://homes.cs.washington.edu/~lazowska/cra/ai.html> accessed 19th August 2024.
[242] Douglas Kouffie, 'How AI is Changing the Immigration Law Landscape' <http://nulawreview.org/forum-posts/how-ai-is-changing-the-immigration-law-landscape> accessed 22nd August 2024.
[243] Justin C. Sanchez et al, 'Innovations in Climate Resilience' (2024) 12 *Frontiers in Environmental Science* 1401203.

intelligence and Kira systems have been utilised to interpret rules, contracts, or other legal documents. They have the potential to identify pitfalls and highlight relevant information.

Despite the numerous advantages of AI, ethical concerns have been raised. There are potential drawbacks that we must be aware of. These drawbacks range from the possible bias of the AI systems to privacy concerns of migrants and citizens of the countries utilising these systems. Bias in AI systems can result if these systems are not trained adequately and correctly. This may lead to discrimination against migrants on diverse grounds, leading to unfair treatment. Further, human integration may be lost to a 'humanlike' as migrants may perceive to be dealing with an impersonal system rather than a human being.

1.1 AI in Border Security and Surveillance

As AI and technology increase, a potential risk is posed in immigration enforcement practices.[244] The use of digital border control technologies in Immigration has increased, and AI efficiently handles vast immigration cases. Case in point: The United States has adopted Artificial Intelligence as its border management and control tool because it grapples with immigration challenges.[245] Proponents have maintained that adopting these systems has seen a potential decrease in vetting and processing immigration cases.

The George W. Bush administration launched an early and unsuccessful automated surveillance program along the U.S.-Mexico border. The goal was to broaden the vision for a secure Border Initiative Network (SBInet), which would integrate personnel, technology, and infrastructure to secure the border. The project was cancelled in 2011 after spending an approximate $1 billion.[246]

Canada, on the other hand, is the best illustration of the changes in its immigration system. The terrorist attacks in 2001 saw much investment and attention on the U.S.-Canada border within both countries' immigration systems. The 9/11 tragedy simmered a heated debate on immigration policies, with fingers pointing at Canada's policies which were seen as lax.[247] The attacks were

[244] Mengesha S, Dunn K, Luangrath N, 'The Rise of AI and Technology in Immigration Enforcement' (23rd March 2024) <https://www.theregreview.org/2024/03/23/the-rise-of-ai-and-technology-in-immigration-enforcement/ >accessed 22nd August 2024.
[245] Department of Homeland Security, 'FACT SHEET: DHS Deploys Pilot Programs, Expands Efforts to Leverage AI to Secure Nation's Critical Infrastructure' (26 July 2024) <https://www.dhs.gov/news/2024/07/26/fact-sheet-dhs-deploys-pilot-programs-expands-efforts-leverage-ai-secure-nations> accessed 22nd August 2024.
[246] GlobalSecurity.org, 'SBInet - Implementation' (14 January 2011) <https://www.globalsecurity.org/security/systems/sbinet-cancellation.htm > accessed 22nd August 2024.
[247] H Adelman, *Canadian Borders and Immigration Post-9/11* (International Migration Review 2002) 36(1) International Migration Review 15, 30.

further suspected to have resulted from porous borders. Concerns about border safety and security continue to receive numerous arguments from different personnel, political lobbyists, scholars and government officials.

As technology evolved, so did the efforts to secure the border; for instance, the U.S. Customs and Border Protection has deployed a system of autonomous surveillance towers. These include a combination of radar and cameras that can communicate with each other and track objects that move within their range. Such systems are helpful in stretches of remote land between ports of entry.

Notably, AI systems have facilitated authorities' more effective allocation of resources which aims at ensuring border safety. The U.S. has relied extensively on AI for border and immigration control. Resource allocation and budgeting are paramount to ensuring the effectiveness of personnel employing AI systems. Reports indicate that the U.S. Department of Homeland Security received over $780 million for technology and surveillance at the border.

Border-focused AI technologies take multiple forms which include algorithms trained to evaluate migrants' or travellers' nuanced and imperceptible emotional expressions, facial recognition, biometric analysis of fingerprints, and scanner software. The scanner software can differentiate between humans and animals in remote border sections. These surveillance systems have been automated so that computers can determine preliminary possible threats and how these threats should be responded to.

AI promises to revolutionise this surveillance which makes these tools more powerful and capable of processing and interpreting more data. Several AI systems have been rolled out globally. Facial recognition technology has found its usage in airports and other border zones. Case in point: Dubai International Airport has begun piloting a smart tunnel to scan travellers' faces and irises.[248] This allows pre-registered passengers to verify their identity faster without presenting their passports or other documents.

However, deploying these tools has been considered faster than the legislation and frameworks governing them and regulating their usage. This has caused a fear of dragnet. The major concerns ranges from privacy concerns , discrimination and bias, and lack of transparency. Civil liberties

[248] Emirates, 'Emirates unveils world's first integrated "biometric path", raising the bar for airport customer experience' (29 October 2018) <https://www.emirates.com/media-centre/emirates-unveils-worlds-first-integrated-biometric-path-raising-the-bar-for-airport-customer-experience > accessed 22nd August 2024.

and human rights activists have argued that the use of facial recognition and drones could infringe on the human rights of migrants and citizen populations.[249]

Critics fear that the adoption and use of the technologies could result in endless surveillance and a vast dragnet. This is because as the technology is deployed to patrol borders, it can also be used in the Country's interior by the local authorities. Evidence shows that local authorities from the border are employing these AI technologies. These include facial recognition technology, cell phone tracking systems, license-plate cameras, drones and spy planes. Additionally, there have been reports of immigration authorities sharing information for non-immigration purposes. This raises ethical questions as to the Data safety of individuals.

Mayowa Oluwasanmi observes that automated immigration decisions can reinforce existing biases and incorrectly categorise people from a particular group as of higher risk or eligible for further vetting. He further notes that automated decisions can infringe on privacy rights because they require mass amounts of data accumulated through surveillance. This mainly targets marginalised communities. Such practices violate the Country's and International human rights Laws.[250]

Karolina La Fors and Fran Meissner question whether using AI in border enforcement can be ethical. They note the guidance-ethic approach to consider the feasibility of dialogue between stakeholders in technology development. This is to evaluate the ethics of border AI from the perspective of migrants. They suggest that policymakers develop alternative approaches in collaboration with migrants impacted by these AI tools.[251]

1.2 Ethical and Legal implication of AI in Migration

As time and the world revolve, AI technology becomes more sophisticated. The legal landscape needs to follow the same trajectory. The current legal landscape offers little to no protection to developing technologies. It is worth noting that people constantly move from one place to another. This calls for countries to adopt the most efficient tools and systems to manage people's movement. As countries do this, various ethical and legal implications are felt on the same limb.

[249] Human Rights Watch, 'Time to Ban Facial Recognition from Public Spaces and Borders' (29 September 2023) <https://www.hrw.org/news/2023/09/29/time-ban-facial-recognition-public-spaces-and-borders> accessed 23rd August 2024.
[250] Mayowa Oluwasanmi, 'Algorithms and Border: The Human Rights Implications of Automated Decision Systems in Canadian Immigration' (2021) 22(1).
[251]K La Fors and F Meissner, 'Contesting Border Artificial Intelligence: Applying the Guidance-Ethics Approach as a Responsible Design Lens' (2022) 4 Data & Policy e36 doi:10.1017/dap.2022.28.28.

Additionally, AI is everywhere and its continuous development and adoption contributes rapidly to the economy.[252] The Royal Society report highlighted that more evidence is needed on how AI is used and how workers' tasks have significantly changed where this has been adopted. The report further highlighted the debate on how existing institutions, policies, and social responses are shaping the evolution of AI and its adoption.[253]

(a) Privacy and data protection

Immigration involves sharing vast amounts of personal data. The legitimate expectation is that a framework is necessary to ensure maximum personal information and data protection. Data protection enforcement authorities pose colossal privacy and data protection challenges.[254] Privacy and data protection laws do not address all AI issues which include algorithm transparency, autonomy and consent of the data subject, surveillance and security, and the overall regulation lag.[255]

Understanding and resolving the scope of data protection law and principles in the rapidly changing AI landscape is not easy. It is paramount to avoid overburdening AI with unnecessary regulatory requirements. This also prevents uncertainty about whether or not regulatory requirements would apply.[256] These concerns range from informed consent to infringement of individuals' data protection rights and surveillance. An individual's rights that might be infringed include the right to access personal data, the right to prevent automated processing of personal data, and the right to prevent processing it in a way that is likely to cause distress or damage.[257]

Individuals are granted minimal control and oversight over how their data is used to infer about them. This raises concerns about algorithm accountability. Immigration laws are silent on the right to reasonable inferences using AI. The laws only offer protection from discrimination on different grounds, such as gender, race, or religious affiliations. Most immigration laws are silent on discrimination, which AI systems may pose.[258]

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[252] Margaret A Boden, *AI: Its Nature and Future* (Oxford University Press 2016).
[253] Frontier Economics, *The Impact of Artificial Intelligence on Work: An Evidence Review Prepared for the Royal Society and the British Academy* (2018).
[254] S Gardner, 'AI Poses Big Privacy and Data Protection Challenges' (Bloomberg Law News, 2016).
[255] European Union Agency for Fundamental Rights, 'Getting the future right – Artificial intelligence and fundamental rights' (14 December 2020) <https://fra.europa.eu/en/publication/2020/artificial-intelligence-and-fundamental-rights> accessed 22nd August 2024.
[256] A T T O R E S I Massimo, 'Opinion 5/2018-Preliminary Opinion on Privacy by Design' (2018).
[257] Miles Brundage et al., *The Malicious Use of Artificial Intelligence: Forecasting, Prevention, and Mitigation* (arXiv preprint arXiv:1802.07228, 2018).
[258] Sandra Wachter and Brent Mittelstadt, 'A Right to Reasonable Inferences: Re-Thinking Data Protection Law in the Age of Big Data and AI' (2019) 2019 *Colum. Bus. L. Rev*. 494.

The main question remains: How will we bridge these systems' accountability gaps? Watcher and Mittelstadt observe that privacy-invasive inferences that can damage one's reputation have very low verifiability regarding predictability or the ability to form an opinion.[259] Additionally, the EDPS, *Artificial Intelligence, Robotics, Privacy and Data Protection Background document for the 38th International Conference of Data Protection and Privacy Commissioners 2016* noted the potential increase of privacy infringements due to the use and adoption of powerful and sophisticated surveillance technologies.

Most countries have adopted data protection laws that offer suitable safeguards and protection against data subject infringement. For instance, the General Data Protection Regulation (GDPR) highlights the rights of data subjects, which include transparency, access to their information, and the right to object to automated decision-making, which is the primary use of AI systems.

The right to be informed of how and where personal information will be used is essential. When using AI, developers should consider each data processing stage's ethical and regulatory restrictions. [260] Brundage propose secure multi-party Computation, which refers to protocols that allow multiple parties to jointly compute functions while keeping each party's input to the function private.[261] Further, other measures that must be adopted are anonymisation, privacy impact assessment, privacy by design, and ethical principles.[262]

(b) Compensation for damage

AI and legal Liability are essential aspects that need to be addressed. AI systems that have not been trained well or suffer from malfunction may damage an individual. Liability issues of AI could be addressed under civil or criminal Liability. Kingston questions whether criminal Liability could ever apply and to whom it might apply in the criminal context.[263] Under civil law, he questions whether an AI is a product subject to product design legislation or a service to which the tort of

[259] Ibid.
[260] Michael J Rigby, 'Ethical Dimensions of Using Artificial Intelligence in Health Care' (2019) 21 AMA *Journal of Ethics* 121, 124.
[261] Brundage, Miles, Shahar Avin, Jack Clark, Helen Toner, Peter Eckersley, Ben Garfinkel, Allan Dafoe et al. "The malicious use of artificial intelligence: Forecasting, prevention, and mitigation." *arXiv preprint arXiv:1802.07228* (2018).
[262] Michael Butterworth, 'The ICO and Artificial Intelligence: The Role of Fairness in the GDPR Framework' (2018) 34 *Computer Law & Security Review* 257, 268.
[263] John K C Kingston, 'Artificial Intelligence and Legal Liability' in *Research and Development in Intelligent Systems XXXIII: Incorporating Applications and Innovations in Intelligent Systems XXIV* (Springer International Publishing 2016) 269, 279.

negligence applies. This poses a question of whether immigration agencies and authorities should be held liable or the companies offering AI systems.

Hallevy elucidates that liability issues could be addressed under consumer protection law. He suggests that the imposition of criminal Liability upon AI entities for committing intellectual property offences is feasible and proposes the sentencing of AI entities.[264] Further, Rachum-Twaig proposes supplementary rules and liability models to provide a better legal structure and framework that fits AI-based robots and systems.[265]

However, in most civil law jurisdictions, strict liability is the avenue to handle most liability issues. Strict liability is a poor solution for modern problems because if one cannot foresee the solutions an AI may reach or its effects, one cannot claim strict liability.[266] States should therefore reinforce the liability regimes to ensure the essential protection of victims of damage caused by these technologies and their applications.[267]

(c) Inadequate accountability for Liability

Accountability is paramount as it offers transparency to those who seek to migrate to other countries. Mechanisms should be implemented to ensure responsibility for deploying and using AI systems. There should also be mechanisms for risk management and mitigating these risks transparently that can be explained to and audited by third parties.[268]

Accountability in AI systems requires a guiding function and an explanation function. A guiding function operates by forming beliefs and making decisions, while a function of explanation operates by placing those decisions in a broader context by classifying them alongside moral values.[269]

[264] Prof Hallevy, 'AI v. IP-Criminal Liability for Intellectual Property IP Offenses of Artificial Intelligence AI Entities' (17th November 2015).
[265] Omri Rachum-Twaig, 'Whose Robot Is It Anyway?: Liability for Artificial-Intelligence-Based Robots' (2020) 2020 U. Ill. L. Rev. 1141.
[266] Yavar Bathaee, 'The Artificial Intelligence Black Box and the Failure of Intent and Causation' (2017) 31 Harv. JL & Tech. 889.
[267] Ryan Abbott et al., Liability for Artificial Intelligence and Other Emerging Digital Technologies (Report from the Expert Group on Liability and New Technologies–New Technologies Formation European Union 2019).
[268] Nathalie A Smuha, 'Trustworthy Artificial Intelligence in Education: Pitfalls and Pathways' (2020) SSRN 3742421.
[269] V Dignum, 'The ART of AI-Accountability, Responsibility, Transparency' (Medium, March 2018).

The *Privacy International Article 19* reports that even when potential harm or damage is found, it is difficult to ensure accountability for violations of those responsible.[270] How can these issues be addressed? Wachter, Mittelstadt, and Floridi suggest that legal accountability mechanisms for AI systems may take a right to explanation. This is done by explaining how it happened, when, and the steps that should be taken to address this issue.[271]

1.3 What next with migration and Artificial Intelligence?

People continue to move from one Country to another in search of better conditions and a better life. This wave includes technological advancements, including deployment. AI has been deployed in communication and connectivity. There is widespread availability of the internet and mobile phones which has seen many people connected. AI issues will continue to be experienced unless a framework is implemented.

This intersection of migration and AI is an evolving landscape with significant and potential advancements for the future. The future is exceptional as the predictive analytics is now possible. Predicting migration patterns and potential crises will increase a country's preparedness to handle the expected challenges. Additionally, the automated AI-driven systems can streamline visa applications, asylum requests and other immigration process. This reduces administrative burdens, costs, and the waiting period.

Despite the advantages of AI-driven systems, this efficiency comes with a legal cost. There is a growing need to conform them ethically to prevent infringement and widespread violation of human rights. Biasness in these systems need to be addressed to prevent any form of discrimination in the future.

AI legal issues that need to be addressed include lack of algorithmic transparency, cybersecurity vulnerabilities, legal personhood, subjecthood, moral agency, intellectual property issues, privacy, and data protection issues. Additionally, accountability for harms caused by AI needs to be addressed.

Further, migration involves communication and the cross-border transfer of personal information from one Country to another. Despite this cross-border transfer, countries still lack data protection

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[270] Matt Bartlett, 'Solving the AI Accountability Gap' (Medium, 2019) <https://towardsdatascience.com/solving-the-ai-accountability-gap-by-matt-bartlett-cc1d9f9aaf3f> accessed 10th August 2024.
[271] Sandra Wachter, Brent Mittelstadt and Luciano Floridi, 'Transparent, Explainable, and Accountable AI for Robotics' (2017) 2 *Science Robotics*: eaan6080.

laws to address and protect their citizens' data misuse. Additionally, nations employing AI systems in their Immigration should establish procedures to ensure safe data transfer.

1.4 CONCLUSION

As AI technologies develop, more study and monitoring will be necessary to address new and even more pressing legal concerns, vulnerabilities, and effects on human rights. Data-driven innovation and intelligent machines that supplement or replace human talents will propel technological advancements; migration included. AI is currently the main topic of discussion, but we anticipate that this will change when technologies converge, and breakthroughs occur. As a result, new and original problems for the law and our cultural values will arise, necessitating new talks.

Artificial intelligence (AI) technologies will have cross-over and multiplicative effects when they interact closely with large amounts of data, aggravating associated legal and human rights issues and individual impact. Suppose industry creates systems and applications without considering the possible effects of these technologies earlier on in the design and development process, whether on human rights, ethical principles, or societal values. In that case, these problems will only become worse.

Numerous topics under examination have broad societal and human rights ramifications. They affect data protection rights, equality, freedoms, human autonomy and self-determination, human dignity, safety, informed consent, integrity, justice and equity, non-discrimination, privacy, and self-determination.

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