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Artificial intelligence in the service of border control in the EU

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Abstract

In this blog post, the author examines the use of artificial intelligence in border control. The analysis links interoperable databases with AI, highlights the inadequate protection of migrants' rights under the Law on Artificial Intelligence, and explores the role of supranational agencies in deploying AI systems for border control.

1. Introduction

The use of artificial intelligence (AI) in the European Union (EU) will soon be governed by the legal framework established by the AI Act (AIA). While the AIA includes provisions prohibiting certain AI systems and categorizing others as high-risk, this classification—based on the level of risk and potential threats to human rights—falls short of fully safeguarding all vulnerable groups, including migrants and asylum seekers. In this paper, we begin by examining specific interoperable databases and the emphasis on enhancing control and identity verification at external borders through AI systems, often at the expense of guaranteed

human rights. We then highlight deliberate and biased omissions in the definitions of AI systems already in use. Finally, we conclude the analysis by exploring the role of AI systems in border control, particularly in the context of coast guard operations within the framework of interagency cooperation among EU supranational agencies.

2. *Use of the AI system in the function of identity verification and borders control*

Since its inception, the EU has established a specialized legal framework for border control through both primary and secondary legislation, much of which is designed to support the functioning of the Schengen area—an area without internal border controls but with shared external borders. One part of this legal framework, or *acquis*, pertains to "smart" external borders, which leverage technological innovations for managing border crossings and verifying individuals' identities through various interconnected, interactive databases. These include the Entry/Exit System (EES), Eurodac, the European Criminal Record Information System for Third Country Nationals (ECRIS-TCN), the European Travel Information and Authorization System (ETIAS), the Schengen Information System (SIS), and the Visa Information System (VIS). Over the past decade, AI systems have been developed to support and enhance the efficiency of identity verification, control, and border security by ensuring interconnectivity or interoperability between the aforementioned databases. Interoperability means that these databases are increasingly less isolated and independent; instead, significant portions of their data are integrated and made available for cross-referencing, either automatically at border crossings or as directed by law enforcement agencies. The ultimate objective is to establish new interoperability components such as the European search portal (ESP), Shared biometric matching service (sBMS), Common Identity Repository (CIR) and Multiple identity detector (MID). To further enhance the efficiency of checks and the identification of individuals entering the EU, a proposal appeared has emerged to utilize computer vision—specifically eye detection—to identify warnings entered into the SIS through cameras installed at border crossings. This proposal involves linking CCTV cameras to police databases across the EU and employing AI systems to track wanted or suspected individuals in real time via facial recognition or vehicle number plate identification at external borders. This is, in essence, a prime example of biometric mass surveillance, an illegal practice that treats everyone as a suspect.

A similar system already operates within the context of smart borders, specifically for migration control and entry/exit management in the Schengen area, known as Automated Border Control (ABC). ABC systems consist of integrated hardware for e-gates, biometric scanning for document authentication, facial recognition, and other biometric checks, designed to streamline passenger processing at border crossings while enhancing security through the use of various AI tools. ABC gates are designed to replace manual passport checks by requiring travelers to insert their passport into a scanner, which captures an image of the passport's photo page. The system then takes a live photo of the passenger's face, compares it

with the passport image, and if the algorithm detects a match, the gate opens automatically. In the EU, these systems for example ABC4EU, are funded under Horizon research and were introduced as pilot projects, in order to test the improvements they bring to the identification of passengers at border crossings in terms of speed, security and automation of certain actions within border checks. Such project is the Biometrics on the Move, in which e-gates or biometric corridors were used at airports in Portugal for facial recognition and contactless fingerprint scanning for passengers leaving the EU, allowing more time for security checks and speeding up the processing of passengers by border police.

The European Travel Information and Authorization System (ETIAS) is a component of the identity verification and passenger control system for those entering the Schengen Area. Initially introduced in 2018, its implementation has faced numerous delays. ETIAS is designed to perform preliminary electronic checks on travelers to the EU who are exempt from visa requirements, using a central unit managed by Frontex. As mentioned, ETIAS is part of the interoperability framework, utilizing databases and automated identity verification to flag individuals who may pose a threat to the security, public order, or public health of EU member states. Its impact on third-country nationals' rights will be significant, as their admissibility to the Schengen Area will be determined by extensive cross-checks of various databases. This includes verifying the existence of arrest or extradition warrants, the use of lost or stolen passports, and reviewing previous visits to Schengen (Article 20 of the EITAS Regulation).

3. (Non)Relevance of classification of high-risk AI systems for border control and migration

There are also provisions in the AIA about identity verification, the use of different databases and border controls. As previously noted, it prohibits certain practices and classifies AI systems as high-risk in areas such as biometrics, criminal prosecution, and migration, asylum, and border management, aiming to safeguard fundamental human rights, especially for vulnerable and marginalized individuals and groups (Annex III AIA, 2024). However, EU migration law related to entry, residence, movement, access to international protection and other individual rights for these categories of people is further complicated by the use of AI systems. In practice, the AIA offers only limited protection i.e adopted text does not provide equal protection to migrants, refugees and asylum seekers because it lacks appropriate provisions on accountability and transparency, which during its implementation will probably significantly contribute to the deterioration of human rights protection. The substantive legal shortcomings of the AIA are evident in its failure to classify as high-risk certain AI systems that are inherently discriminatory, as they are used to assess the threat migrants and asylum seekers may pose to public order and security. These systems also employ predictive analytics to expedite the rejection of their entry into the Schengen Area. This legislation establishes a specific legal framework for the use of AI to enable the testing and use of dangerous technologies in EU border control. These are AI systems used in the context of migration, such as non-remote biometric identification systems (already located at

airports or border crossings), fingerprint scanners or predictive tools that take preventive action, preventing and limiting migration. In addition to all this, AI systems in the areas of internal affairs and investigation confidentiality are subject to permissible restrictions on transparency and disclosure of any data used by law enforcement agencies and border control services. Moreover, the current application of certain AI systems in these areas and in migration control not only does not fall under prohibited practices, but these systems are not even considered high-risk (Kilpatrick & Jones 2022, 11). The adopted text of the AIA establishes a national security exception, making it largely a digital rights-free zone. For the aforementioned areas, the AIA sets forth rather broad and vague exemptions, meaning that special obligations, safeguards, and AI system controls will not apply, leaving the data of potentially hundreds of millions of foreign nationals vulnerable to practices that would otherwise be prohibited.

Not only are they not part of prohibited practices, but the AI systems currently used for automated border control, predictive analytics, and migration and asylum control are largely either unclassified or fall under low-risk AI systems, with only emotion-recognition biometric systems being categorized as high-risk. Given all of this, along with the increased disproportionate risk of violating fundamental rights and broader structural injustices and inequalities, it is clear that AI systems for border and migration control must be classified as high-risk by Commission implementing acts and subject to accompanying impact assessments on fundamental rights and transparency obligations (Kilpatrick & Jones 2022, 23).

4. AI in the function of interagency cooperation on the control of the external borders

The use of AI systems in controlling external borders is linked to enhanced inter-agency cooperation between various supranational agencies, as well as their collaboration with national border services. In this context, the establishment of a coast guard function is significant, within which the European Maritime Safety Agency (EMSA), the European Border and Coast Guard Agency (Frontex), and the European Fisheries Control Agency (EFCA) support national authorities in patrolling and monitoring the EU's maritime space. The legal basis for the jurisdiction of these three agencies was established through amendments to their founding acts in 2016, which included a joint article on European cooperation in coast guard functions (Article 69 of the EGMS Regulation).

The Coast Guard focuses on two key functions where AI systems are most actively researched and tested: delivering surveillance and communication services through state-of-the-art technology, including space and ground infrastructure and sensors across various platforms, and enhancing information exchange and cooperation. Particularly important in this context is the operational collaboration between EMSA and Frontex in executing operations to combat irregular migration and cross-border crime along Europe's maritime borders. This partnership is vital for the interactive and mutual support provided in the implementation and use of the European Border Surveillance System (EUROSUR). EUROSUR is an EU external border

surveillance system designed in 2013, intended for the exchange of information between national border services and Frontex with the aim of preventing cross-border crime and irregular migration and protecting the lives of migrants in joint search and rescue operations. Following amendments to the regulation in 2019, EUROSUR became an integral component of the European Border and Coast Guard. The system includes an integrated network of cameras and satellite imagery, enabling real-time monitoring of migratory movements and the flow of migrants across all sections of the external borders under the control of member states' border services.

The system or service called EUROSUR Fusion Services (EFS) has been introduced, which contributes to the creation of the European situational picture (ESP), as well as special and national situation pictures (NSP). It collects data from various sources and platforms, aggregates it, and combines it into tailored information services related to European border surveillance, control, and management (Articles 27 and 28 of the EGOS Regulation). EUROSUR consolidates data from border surveillance and control using aircraft, boats, and drones, which, when combined with other sources, are used to produce analyses and risk assessments in the process of making strategic decisions and planning operational activities (Kilpatrick & Jones 2022, 22). This integration of various surveillance technologies as part of the AI system is, among other things, intended to provide information for predictive analytics and can also be used for participation in immediate operations and interventions.

The joint missions of Frontex, EMSA, and EFCA also involve research into the integration of drones for maritime surveillance, as well as the control of international waters and sea borders of EU member states. Together, these three agencies coordinate efforts with approximately 300 civil and military authorities in EU member states. Frontex has conducted extensive research into the potential of drone surveillance under various conditions, evaluating parameters such as flight altitude, autonomy, durability, and the drones' effectiveness in monitoring maritime patrols. This research also explores the drones' role in supporting search and rescue operations, identifying suspicious vessels, and facilitating real-time information exchange with multiple users. Between 2018 and 2020, the agency tested drones equipped with thermal cameras and radars in collaboration with the Greek, Italian and Portuguese competent services for maritime safety.

The use of drones in border control as part of the AI system, given their potential for mass surveillance with unpredictable consequences for migrants' rights, should be prohibited under Article 5 of the AIA, with no exceptions allowed. However, deviations from this rule are permitted for drones and other mass surveillance systems, as well as the use of biometric data in real-time or retrospectively, when justified by national security concerns, the detection of serious crimes, or the prosecution of criminals. In effect, the AIA enables what it was intended to prevent: the application of AI systems against migrants, asylum seekers, and other vulnerable groups, including those categorized as part of the "danger" of "secondary movement." This should not be the rule but rather a rare, narrowly defined, and strictly regulated exception.

5. Conclusion

Artificial intelligence is increasingly being used to support border services in everyday tasks and identity verification, speeding up the flow of people. Understood and presented as a tool to support and simplify procedures in border control and migration, its use already significantly affects the reduction of the scope of guaranteed fundamental rights of certain vulnerable categories of persons. Cases in which some AI systems remain outside the scope of the AI law regulations and directly affect the rights of individuals only for member states to avoid the intended control, responsibility and transparency for their application in the field of internal affairs, criminal prosecution and national security, show devaluation and disrespect for basic values of which the Union was built. In essence, the analysis results in the conclusion that the implementation of artificial intelligence systems in the control of land and sea borders, by national and supranational law enforcement services, will further increase the existing gap between fundamental rights and security, which will ultimately reduce the protection of migrants and those seeking international protection.

LITERATURE

AIA -Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act), OJ L 2024/1689. 2024.

J. Kilpatrick, C. Jones, *A clear and present danger - Missing safeguards on migration and asylum in the EU's AI Act*, Statewatch, 2022. https://www.statewatch.org/media/3285/sw-a-clear-and-present-danger-ai-act-migration-11-5-22.pdf (last access 12.10. 2024)

REGULATION (EU) 2019/1896 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 November 2019 on the European Border and Coast Guard and repealing Regulations (EU) No 1052/2013 and (EU) 2016/1624. OJ L 295/1. 2019.

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