THE LAW OF THE ALGORITHMIC STATE IN HUNGARY

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Abstract

The digitalisation of public administration and administrative services is a priority for the state, and in recent years, significant developments have been seen in the field of algorithmic governance. Additionally, since 2020, the Hungarian Government has implemented an Artificial Intelligence (AI) Strategy with the goal of building a 'data-driven, service-provider state' over the next decade.

After examining the legislative background of this topic and the daily operations of public administration—particularly in providing public services to citizens—it can be concluded that AI-related developments are still in their early stages. There is little legislative clarity regarding the technological and infrastructural foundations needed for AI integration, such as electronic administration and e-proceedings. Although the AI Strategy is ambitious, and the new legal act on the digital state sets forth promising goals for the future, the current regulatory framework lacks specific legal guidance. Actual implementation remains constrained by societal digital literacy and an underdeveloped IT infrastructure. Legal and academic discussions tend to focus more on the potential future impact of AI rather than its present-day applications.

In conclusion, Hungary is striving for a prosperous future as it navigates a challenging path towards realising a data-driven concept of state.

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This paper was supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences.

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1. Introduction to the State of the Art and Methodology

In Hungary, there is no specific legislation addressing *artificial intelligence* (AI) itself, and there is no legal definition for AI. In today's Hungarian public administration, the use of AI applications is not yet widespread, but some AI technologies are starting to be integrated into public administration procedures.

The Digital Welfare Programme was launched in 2015, aimed at digital development in the fields of education, child protection, export, agriculture, startups, and others[1]. Since 2020, Hungary has had a strategy on AI[2], outlining the fields of public administration where it is already in use and also marking the future path of development. AI is not a central legislative issue in public administration; instead *e-public administration* and *e-administrative services* (or, as it is now being called, *digital public administration* and *digital public services*) are the terms in use.

[1] Gov. Decision 2012/2015. (XII. 29.) on the Digital Welfare Program to be implemented by the Government based on the results of the national consultation on the Internet and digital developments (InternetKon). Programmes are available at https://digitalisjoletprogram.hu/en/about.

[2] *Magyarország Mesterséges Intelligencia Stratégiája 2020–2030*, available at https://digitalisjoletprogram.hu/files/2f/32/2f32f239878a4559b6541e46277d6e88.pdf (visited 20 May 2024) [AI Strategy]. See also Gov. Decision 1573/2020 (IX. 9) about Hungary's Artificial Intelligence Strategy, as well as some measures necessary for its implementation.

Hungary is presently undergoing a transition, during which the recently enacted *Act CIII of 2023 on the digital state and certain rules for the provision of digital services* (Digital State Act) is gradually replacing the former regulations on the fundamentals of electronic public services until July 2025.

In Hungary, the history of e-administrative services started with the introduction of the second code of administrative proceedings that replaced the 1957 Act and declared the possibility of conducting *certain* administrative authority procedural actions electronically following 1 November 2005. Also, e-administration has become a fundamental right for the user: the act empowered uers to carry out certain procedural actions electronically and allowed for the electronic communication of official decisions[3].

Over the past two decades, the interpretation of the concept of electronic administrative proceedings has undergone several changes including changes in the concept of centralised and decentralised models[4]; there is yet no uniformly accepted definition in the literature. From the regulatory perspective, it is crucial to note that e-administrative proceedings are not considered an independent type of authority procedure but rather a specific form of proceedings with e-interaction between the user and the authority. Act CCXXII of 2015 on the General Rules of Electronic Administration and Trust Services (GREATS) entered into force in 2016 and became a *lex specialis* to the ordinary administrative procedural code.

Electronic administration is described as procedural acts wherein the client or administrative body issues electronic statements and where non-electronic statements from the client or another administrative body are converted into electronic statements, which are then used during the procedure. The concept of e-administration covers a complex process that includes information and all aspects of interaction between the authority and the clients[5]. Currently, more than 4,000 different types of

[3] Act CXL of 2004 on the general rules of public administrative authority procedure and service (Ket.), Article 8 (1).

[4] B. Veszprémi, *A stratégia-alkotástól a SZEÜSZ-ökig, elméleti alapok*, 16(2) Miskolci Jogi Szemle 355–357 (2021).

[5] Since 1 April 2012 by Act CLXXIV of 2011, Act CXL of 2004 on the general rules of public administrative authority procedure and service, Article 172.
The Regulated Electronic Administration Services (SZEÜSZ) system, introduced in 2012, is built on modularity and standardisation, allowing seamless integration with existing public administration information systems through

authority affairs can be handled online at least at some of its stages. Meanwhile, the use of e-solutions is not as widespread as it could be,[6] mostly because of the low digital literacy of society. Thus, the direction of developments in public administration over the coming years is the implementation of digital public administration with special regard to those age groups that are only able to use the services provided by the digital world with difficulty or not at all[7].

As for the current status of digital public services, the key Digital Economy and Society Index indicators of 2022 showed a mixed picture. Hungary performs well on broadband connectivity. It remained a leader in the take-up of at least 1Gbps broadband, as 22% of households subscribed to such a service in 2021 compared with 7.6% in the EU. The country scores above the EU average also on overall fixed broadband take-up, 5G spectrum and fixed very-high-capacity network coverage. On human capital, however, the country falls beyond the EU average: 49% of individuals have at least basic digital skills, below the EU average of 54%. There was substantial progress on the demand side of e-government with 81% of internet users having engaged with the public administration online in 2021, up from 64% in 2019 and above the EU average of 65% in 2021. However, the quality and completeness of the supply of services for both individuals and businesses remained relatively low[8]. The overarching objective by 2030 is to attain a 60% usage rate of public authority procedures, involving the active participation of 2 million citizens (out of a total of 9,6 million). This engagement will

standardised interfaces. SZEÜSZ modules, which include essential e-government services, can be centrally provided by the state (KEÜSZ) modules. Since 1 January 2016, KEÜSZ has dominated e-administrative services, but legislation permits continued use of SZEÜSZ, and the state must ensure their operation even if no market provider offers them. See B. Baranyi, P. Homoki, T. Kovács, *Magyarázat az elektronikus ügyintézésről* (2018) point 15; A. Orbán, *E-közszolgáltatások rendszerei és folyamatmenedzsment*, in P. Sárvári (ed.), *Informatikai rendszerek a* közszolgálatban I. (2020) 57; Z. Czékmann & G. Cseh, *Elektronikus közszolgáltatások a SZEÜSZ-ök tükrében*, 32 Publicationes Universitatis Miskolcinensis Sectio Juridica et Politica 139 (2014).

[6] E. Csatlós, *The Power of Information: (Digital) Authority Procedure in the 21st Century Hungary*, 16(65) Bulletin of the Transilvania University of Braşov, Series VII, Special Issue.

[7] T. Pilz, *Fenntarthatóság és alkalmazkodóképesség – avagy mi várhat a magyar közigazgatásra a következő években?*, 10(1) Pro publico bono – Magyar Közigazgatás 12 (2022).

[8] Digital Economy and Society Index 2022, *Hungary*, available at https://digital-strategy.ec.europa.eu/en/policies/desi-hungary 3-4.

be facilitated through the use of a data wallet, empowering individuals to manage and use their data[9]. The question now is where AI is behind the numbers.

The exploration of the research topic mainly focuses on the textual review of normative content and available statistics. In Hungary, administrative authority decisions are generally not accessible to the public, except for certain authorities such as the data protection authority and decisions of the ombudsperson. Consequently, comprehensive research on administrative authority decisions may be challenging. However, what is accessible is the judicial review of administrative authority decisions. Court judgments in principle are made publicly available, albeit in an anonymised version, and can be accessed through a database[10]. Since March 2020, apart from some exceptions, the general legal remedy against authority decisions is judicial review[11], if there is a constant and significant practical problem related to a legal provision.

Due to the lack of any official (legislative) definition, in the context of this article, AI will be understood as it is used in the AI Strategy of Hungary: a *software capable of replicating aspects of human intelligence, enabling it to support or autonomously perform processes such as perception, interpretation, decision-making, or action*[12].

Currently, the supporting function is more frequently used than a completely autonomous process with automated decision-making at the end; AI is not (yet) used in decision-making[13].

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[9] AI Strategy, cit. at 2, 20.

[10] Act CLXI of 2011 on the organisation and administration of the courts, Article 163-166. The database is available at https://birosag.hu/ugyfeleknek/birosagi-hatarozatok-gyujtemenye.

[11] Act CXXVII of 2019 on the amendment of acts related to the creation of single-level authority procedures at district level, Article 198; N. Balogh-Békesi, K. Pollák, L. Vértesy, *A közigazgatási hatósági eljárás -jogorvoslati rendszere, különös tekintettel a közigazgatási bíráskodás alapvető kérdéseire* (2022) 6; N. Balogh-Békesi Nóra, *Gondolatok a jogorvoslathoz való jogról*, in Z. Peres & G. Pál (eds.) *Ünnepi tanulmányok a 80 éves Tamás András tiszteletére: Semper ad perfectum* (2021) 48–49.

[12] AI Strategy, cit. at 2, 9.

[13] AI Strategy, cit. at 2, 38; A. Fábián & P. Stankovics, *A közigazgatási döntéshozatal támogatása elektronikus eszközökkel, különös tekintettel a hatósági eljárásra*, 2(1) *KözigazgatásTudomány* 71–84 (2022); Orbán, cit. at 5, 75–91.

2. The General Legal Basis for the Use of AI

The Fundamental Law of Hungary declares that to enhance efficiency, improve the quality of public services, ensure transparency in public affairs, and promote the principle of equal opportunity, the state must strive to incorporate the latest advancements in science and technology[14]. The current state of public administration has been shaped since 2010 by an overarching reform known as the *Magyary Program*[15]. Since its announcement, a strategic way of thinking has guided the development of public administration. The reform's motto aimed to establish *a service-provider state* with a simplified, user-centric approach to public administration where e-administration and administrative services play a central role[16]. The current goal is now to establish the *digital state*[17].

AI was first mentioned in the development strategy of the info-communication sector for the period 2010-2014 as a field worthy of support[18]. The National Artificial Intelligence Strategy of 2020–2030 further anticipated the concept of a *data-driven service-provider state*[19].

To serve these purposes, the GREATS[20] is replaced by the Digital State Act with effect from September 2024. AI-based technology appeared in the legislation in 2021[21], and the new legislation on e-administrative services (which are now called *digital public services*) also relies on technology and services based

[14] Fundamental Law of Hungary, 25 April 2011 [FL] Article XXVI.

[15] Magyary Zoltán Közigazgatás-Fejlesztési Program (MP 11.0), Budapest 2011, 36; Magyary Zoltán Közigazgatás-Fejlesztési Program (MP 12.0), Budapest 2012, 6, 41-45.

[16] Közigazgatás- és Közszolgáltatás-fejlesztési Stratégia 2014-2020, available at http://www.2015-2019.kormany.hu (visited 20 May 2024) 18.

[17] Nemzeti Infokommunikációs Stratégia 2014-2020, available at https://2010-2014.kormany.hu/download/b/fd/21000/Nemzeti%20Infokommunik%C3%A1ci%C3%B3s%20Strat%C3%A9gia%202014-2020.pdf (visited 20 May 2024) 45-53.

[18] Ibid. 105.

[19] AI Strategy, cit. at 2, 38.

[20] Act CCXXII of 2015 on the General Rules of Electronic Administration and Trust Services (GREATS) was in force between 1 January 2016 and 1 September 2024.

[21] GREATS contained references to AI since 2021, when it was modified by Act CXX of 2021 on measures to modernise certain procedures (in force since 2 December 2021). Also, its executive decree, Gov. Decree 451/2016. (XII. 19.) on the detailed rules of electronic administration, mentions the use of AI technology in the field of contracting (GREATS executive decree).

on AI, although it remains indebted to the definition or the regulation on the details or circumstances of the use of AI[22]. As of 30 July 2024, executive decrees are not yet available.

The right to electronic administration is provided by the GREATS[23], and the Digital State Act aims to ensure a developed version for it. It is smartphone-focused and aims to shift identity cards, administration, and signature activities to a mobile application by the end of 2024. A *mobile-friendly approach* prioritises administration primarily on mobile phones (and other portable devices as envisaged by the legislator), allowing citizens to access necessary services anywhere and at any time. The introduction of a new *digital citizenship* concept with a *digital citizenship identifier* aims to simplify administration and eliminate the need to provide personal data for each new case[24].

The main objective of the new Digital State Act is to ensure that *comprehensive digital services* will provide citizens with various digital services, including online identification and signature, secure electronic communication and document management, as well as online payment systems. It promotes the usage of data available in state registers and better cooperation between state bodies. Also, it aims to promote the management of private law legal relationships in digital form by modernising legal processes and transactions. It is important to emphasise that, as a general rule, digital citizenship is optional, except in cases mandated by law. The user profile holder retains the discretion to decide whether they want to apply the new digital services[25].

Digital citizenship is designed to be built upon data managed in authentic state registers. Within the framework of digital citizenship, all state registers and specialist systems will cooperate in a coordinated manner, providing data automatically to the extent necessary for service provision. This ensures that AI is used even without explicit mention of its use. As of now, it can be concluded that the legislator does not generally explore whether AI is the basis when regulating different legal institutions and procedures. Thus the ban on the use of AI does not appear to be a subject of normative regulation either. It is technical information

[22] Act CIII of 2023 on the digital state and the detailed rules of digital services (Digital State Act) Article 47 (5)-(7).
[23] GREATS, Article 8 (1).
[24] Digital State Act, Article 1 and 3.
[25] Commentaries to Act CIII of 2023, Article 1.

that is simply not provided in normative texts. However, exceptions do exist[26]. Also, when the law enlists the central electronic administration services that the government provides through the service provider designated by law, it states that technology based on AI *can also be used* for support services[27]. Beyond this line, the question of AI is not mentioned.

3. AI in the Daily Operation of Public Administration

Without any comprehensive collection and structured review of data (statistics), it is hard to tell which sectors are the most affected by algorithmisation. Also, the numbers presented in this paper are hard to compare; all areas represent a completely different purpose and have significantly different consequences, including legal effects.

In Hungary, AI is used in the banking sector, telecommunication, retail trade, logistics, production agriculture energetics, healthcare, and public administration, to name but a few examples[28]. In public administration, AI is widely used in the following areas: identification for e-administration, telecommunication, and decision-making[29].

The prerequisite for using AI is the possibility of e-administrative proceedings. Since there is no longer a need to physically visit the offices of the public authorities, numerous cases can be efficiently managed online at the website managed by the *National Info-communication Service* (NISZ)[30]. This is a unified

[26] GREATS executive decree, Article 7/B (4) explicitely mentions AI in the case of administration with a video technology connection. When the validity of the user's statement requires the signature of the client and the representative of the authority, these can be replaced by a voice transcription service based on AI.
[27] Digital State Act, Article 47 (1) and (5), GREATS, Article 38 (1) and (5).
[28] AI Strategy, cit. at 2, 14-15. The areas of AI-usage are enlisted by the AI Stategy of Hungary, but the role of AI is not explained and there is no information on the technical background of these services either.
[29] *ÁSZ elemzés, Az állami nyilvántartások és az elektronikus ügyintézés* (2021) 35.
[30] NISZ Zrt. is a private limited company. It is the leading infocommunication service provider in the Hungarian public administration sector. Since September 2022, the ownership rights over it are exercised by the Digital Hungary Agency (*Digitális Magyarország Ügynökség – DMÜ*). DMÜ is responsible for the operation of e-public administration and IT systems and their infrastructure, the unification of e-public administration and IT developments, and the performance of state tasks related to electronic communication activities for government purposes and ensuring the infrastructural feasibility of public administration IT. See Gov.

interface that can be customised by the client, providing the identified customer with a uniformly accessible opportunity to fulfil declarations, procedural actions, and other obligations required for electronic administration. It also allows the client to access electronic administration services. The application integrates various case types available through the *Webes Ügysegéd* (which has been functioning since 1 January 2013), facilitating the electronic administration of records and document systems maintained by the Ministry of the Interior. The number of cases is decreasing as the services are becoming integrated into the other portal (<magyarorszag.hu>)[31]. The interface provides accessible information to everyone, but beyond the detailed description of the cases, the online submission of claims and the achievement of specific services require a secure login facilitated by the modern identification services of the Central Identification Agent.

3.1. Identification for e-Administrative Proceedings

The identification of the client is the initial and essential step in handling administrative matters; therefore, for e-administration, it is also a crucial precondition. There are several types of identification options to start an online procedure, including AI-based solutions[32].

(i) *Client Gate* (*Ügyfélkapu*) is an identification service that enables citizens to securely contact organisations that provide e-administration and electronic public services with a username and password. The identification service has been available since April 1, 2005. This is the oldest and most frequently used identification service (97.75%). As of December 31, 2022, a total of 5,529,775 Customer Portals with valid passwords were registered, indicating an increase of 411,840 from the previous year, representing an 8.05% growth in one year. In 2022, citizens utilised user portal

Decree 307/2022. (VIII. 11.) on the designation of the Digital Hungary Agency Private Limited Company and the definition of some of its tasks, as well as detailed rules related to the coordinated provision of national IT and e-public administration activities, Article 2–6.

[31] *2022 évi monitoring jelentés. Belügyminisztérium – Informatikai Helyettes Államtitkárság Rendvédelmi Informatikai és Elektronikus Rendszerek Működtet*ésért és Fejlesztéséért Felelős Főosztály, Szolgáltatásmenedzsment Osztály [Statistics 2022], available at https://www.nyilvantarto.hu/hu/statisztikak (visited 20 May 2024) 6–7.

[32] GREATS, Article 35.

identification 202,679,914 times[33]. In 2023, a growth of more than 6% was seen in the number of registered persons, and by the end of the year, 5,814,230 persons had valid passwords for the system. As password validity is two years, and to avoid abuses and multiple user ID-s, obtaining first access to the system requires the assistance of a public servant. It is supposed that more than half of the population is able to conduct online e-proceedings[34].

It also allows the usage of *e-Papír* which is a free, authenticated messaging application that electronically connects clients with the institutions connected to the service via the internet in use since 2018[35], so it is like a closed and secured mailing service. Client Gate has been supplemented with an advanced service for enhanced security since 4 June 2022. *Client Gate+* has two-step protection. In addition to the existing user portal username and password, a third datum is needed for identification that can only be linked to the mobile device of the user. During its first seven months, a total of 577,450 individuals used this identification method[36], while in the first half of 2023, 749,498 identifications were carried out this way[37].

(ii) *ePersonal ID* is a permanent ID card with a chip, which has been in use since 2016. This identification method enables two-factor identification: the two factors are possession of ePersonal and knowledge of the corresponding unique, six-digit PIN code[38]. In 2022, 3,266,513 identifications were made by ePersonal ID card which meant an average of 2% of the overall e-cases each month[39]. In 2023, this number was 1,815,021[40].

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[33] Statistics 2022, cit. at 31, 8–9.

[34] Monitoring data 2023, at https://www.nyilvantarto.hu/hu/statisztikak?stat=monitoring (last visited 20 May 2024)

[35] Pilz, cit. at 7, 18.

[36] Statistics 2022, cit. at 31, 9.

[37] *2023. I. féléves monitoring jelentés. Belügyminisztérium – Informatikai Helyettes Államtitkárság Rendvédelmi Informatikai és Elektronikus Rendszerek Működtetéséért és Fejlesztéséért Felelős Főosztály, Szolgáltatásmenedzsment Osztály* [Statistics 2023 I.] available at https://www.nyilvantarto.hu/hu/statisztikak (last 20 May 2024) 9.

[38] Gov. Decree 93/2016 (V.2.) on the necessary amendment of certain government decrees for the introduction of the time stamp service related to the electronic signature of the identity card.

[39] Statistics 2022, cit. at 31, 9.

[40] Identity card statistics (2023), at https://www.nyilvantarto.hu/hu/statisztikak?stat=monitoring (last visited 20 May 2024).

(iii) *Face ID* service enables interaction with authorities from a computer, tablet or smartphone starting from 1 May 2020. Its use only requires a one-time registration, which is done via video communication with the help of a public servant. Following registration, no additional identifier (e.g. username, password or PIN code) need be used. The system will perform the identification automatically, based solely on the client's photo and identity document[41]. The bodies and authorities responsible for e-administration can thus also stay in contact with the client through a system capable of transmitting and recording video and audio based on a live video communication channel. This type of identification has been permitted for telemedicine[42]; to capture a uniform photo and signature for the automatic issuance of a driver's licence, and to register and modify the credentials to the user access portal. It is less frequently used than other identification types; in 2022 the service was used 296,390 times[43], and 164,270 times in the first half of 2023. No data are available for the rest of the year[44].

This type of interaction is possible in administrative proceedings. For telemedicine, the use of AI for identification may also be mandated by ministerial decree. It should be emphasised that only the identification is performed by AI; it is a human healthcare worker that contacts and interacts with the patient, not an AI system[45].

(iv) *Phone ID* (RKTA) is an identification method that can be used to handle some administrative matters over the phone with the help of the staff of the 1818 Public Administration Customer Line. After online registration, the user receives an eight-digit telephone code, and after calling the Line, another six-digit code is given. Together with these ID elements, certain cases can be handled over the telephone. In the light of the Digital State Act and its aims, this is meant to be the future of e-administration. In 2022,

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41 Act CXVI of 2019, Article 38(12); Act CLXXXVIII of 2015 on the face image analysis registry and the face image analysis system, Article 12, 12/A-12/D; GREATS, Article 17/A.

42 Act XCIX of 2021 Article 202; Act CLIV of 1997 on healthcare, Article 106/A. See further Á. Homicskó, *A telemedicina alkalmazásának jogszabályi környezete Magyarországon*, 8(4) Glossa Iuridica 238–240 (2022).

43 Statistics 2022, cit. at 31, 10

44 Statistics 2023 I, cit. at 34, 10.

45 Á. Dósa, P. Hanti, Z. Kovácsy (eds.) *Nagykommentár az egészségügyről szóló 1997. évi CLIV. törvényhez* (2023), Commentaries to Article 106/A-106/C.

people handled 518,378 e-administrative cases on the telephone by using this type of identification[46]; in the first half of 2023, this number was 204,166[47].

3.2. User Service and Work Support

Since late 2021, several AI-supported services have helped streamline workflows and aim to relieve public servants in tasks related to general information sharing or database-related affairs when the procedural steps are suitable for digitalisation[48].

(i) Communication and information sharing

The *voice production service* converts electronically available text into voice-based speech by machine and the *voice transcription service* converts live speech and digitally recorded speech in archived media materials into written text. The user can check the transcribed text and make changes to it, and it is considered a statement if it has been approved by the client. The service provider will send a copy of the transcribed text approved by the customer to the client's storage location in the event of such a request[49].

The *communication assistant* is a software solution that can conduct a conversation similar to a dialogue between two people and interactive communication with the participation of a real person in a collaborative way, or automatically, without the intervention of a human being. The assistant can develop through a machine self-learning process. The body providing electronic administration can also use it when employing a voice connection, video connection, or written communication. Therefore, on websites through which e-administration or information about it is available, the icon of the assistant appears (usually in the form of a brown haired girl) with the text '*Segíthetek*?' (May I help you?). Also, to relieve the burden on the Government Help Line (1818), the AI-supported *ChatRobot* was introduced in May 2021. The chatbot successfully answered 38.5% of the questions asked on this channel (600,366 queries), while in 59.5% of cases, it facilitated the tasks of public servants by providing answer tips. Only 2% of the

[46] Statistics 2022, cit. at 31, 9.
[47] Statistics 2023 I, cit. at 34, 9.
[48] Entered into force on 23 December 2021 by Gov. Decree 717/2021. (XII. 20.) Article 20(11); Gov. Decree 451/2016. (XII. 19.) on detailed rules of electronic administration, Article 135/I.
[49] GREATS executive decree, Article 134/J-134/K.

remaining questions required human intervention to provide full answers.[50]

(ii) AI-supported terminals

Touch-screen devices were launched in January 2022, within the framework of the *KIOSZK project* (*mesterséges intelligencia asszisztens - MIA*), to assist customers easily and quickly manage their administrative affairs electronically. These devices are placed in different frequently visited office premises, post offices, and Digital Welfare Program Points[51]. In the first half of 2022, they were used in test mode. The installation of the devices and their large-scale use kicked off in the second half of 2022. By the end of 2022, 338 devices were operating across the country, and they were used in 7,621 cases for handling administrative authority proceedings online, saving a personal visit to the official premises of the authorities.

As of 2023, thirteen types of administrative proceedings can be initiated on the MIA terminals: application for a certificate of good conduct, driver's licence replacement, address notification, birth certificate, marriage certificate, registered partnership application certificate, withdrawal of a vehicle, extension of the temporary withdrawal of a vehicle by an individual, replacement of an identity card, and verification of document validity. A total of 14,338 cases were submitted at the terminals in 2023. The most popular case types were certificate of good conduct applications, birth certificate requests, and verification of document validity[52].

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[50] The National Food Chain Safety Office (*Nébih*) also has a charbot, called Nébo that answers the questions of users visiting the office on the Facebook Messenger interface 24/7 and also receives food chain safety announcements. This service has been running since 1 July 2020. Press announcement: *Július 1-től Nébo segíti a Nébih ügyfélszolgálati munkáját. 2020. július 1*, at https://portal.nebih.gov.hu/-/julius-1-tol-nebo-segiti-a-nebih-ugyfelszolgalati-munkajat# (visited 20 May 2024).

[51] Digital Welfare Program Points are locations where citizens can access digital technologies and the internet, as well as participate in various digital skill development programs and courses. They have been set up to help reduce the digital divide and provide everyone with the opportunity to benefit from the digital world.

[52] *2023. éves monitoring jelentés. Belügyminisztérium – Informatikai Helyettes Államtitkárság Rendvédelmi Informatikai és Elektronikus Rendszerek Működtetéséért és Fejlesztéséért Felelős Főosztály, Szolgáltatásmenedzsment Osztály* [BM Report], at https://www.nyilvantarto.hu/hu/statisztikak (visited 20 May 2024) 9-10.

3.3. Automated Decision-making

Complete automation, where the entire administrative authority process can be carried out without human intervention, is still in its infancy. However, the current government aim is to achieve a 'data-driven service state,' making the development of automatic decision-making functions a priority[53].

Automated decision-making as a type of administrative procedure has been part of Hungarian administrative practice since 2016-2017[54], and the regulatory environment underwent significant changes in July 2023[55]. Automated decision-making can be initiated by both clients and the authority[56]. Users can learn about the methodology and essential procedural rules as they are published on the electronic administration interface. Not all type of cases are suitable for automation; currently, most are authority proceedings that rely on data from an authentic database affecting the population to the greatest extent (e.g. personal data and address register, estate register, vehicle register) maintained under the responsibility of the Minister of Interior[57]. The Ministry of the Interior has given the name 'simplification project' to the innovations that make automation possible in certain very common types of cases when the in-person visit to the authority is as avoidable as human intervention by public servants. Thus, from February 1, 2021, within the framework of the simplification project, certain administration processes related to birth, marriage and death became easier, and the electronic application for a driver's licence was implemented. In 2023, 254,770 people applied electronically for first issuance, category extension, or extension of their driver's licence. In the case of a name change due to marriage, 3,296 people requested to officially change their identity card, 2,091 people applied for a driver's licence, and 3,504 people requested a

[53] AI Strategy, cit. at 2, 38.

[54] First, it was introduced by GREATS from 1 January 2016, then, a modification introduced it to code of the general proceeding a year later, the Ket. See details through a type of proceedings: E. Rító & Z. Czékmann, *Okos megoldás a közlekedésszervezésben - avagy az automatikus döntéshozatali eljárás egy példán keresztül*, 13(2) Miskolci Jogi Szemle 115 (2018).

[55] Act LX of 2023 on the amendment of certain laws related to the organisation of gambling and electronic administration and to strengthen the coherence of the legal system, Article 32.

[56] GREATS, commentaries to Article 11.

[57] GREATS, Article 11 (4)–(5); Digital State Act, Article 21 (3)–(4).

passport. In these cases, the new document (decision) was made automatically[58].

Absolute automatic decision-making occurs if the request was submitted online by the client and the decision does not require consideration, meaning a legal decision can be made by applying a cogent provision. It is also necessary for the data required to manage the case to be either available or obtained through automatic information transfer. In such cases, the procedural actions required during the process are carried out without human intervention, including the decision concluding the procedure, which is announced along with the fact that it was made through an automatic process[59].

On the other hand, *relative automated decision-making* means that the claim is not submitted online, but the circumstances of the case are clear, requiring no deliberation, and there are no conflicting user interests[60]. If the legislation permits it, such cases can be handled in an automated manner, although human intervention is typically required at the outset to initiate the process[61]. Therefore, it substantially contributes to facilitating the workflow even when human intervention is still required[62].

Although current legal practice does not yet rely on AI for automated decision-making, and the number of cases where the decision is made through automated processes is relatively low, several worrisome issues have already been raised regarding the simplicity and lack of individualisation implicit in such decisions. When algorithmic data processing leads to a negative outcome for the applicant, the absence of necessary information, whether related to the factual background of the case or the lack of clear guidance on available legal remedies, creates an information gap for them. While individuals have the legal right to seek judicial review of these decisions, the effectiveness of such reviews is questionable. First, the applicant's lack of information often renders it difficult to exercise their right to a legal remedy. Second, tribunals are frequently unable to assess the legality of the public

[58] BM Report 2023, cit. at 52, 13.
[59] GREATS, Article 11; Digital State Act, Article 21.
[60] Act CL of 2016 on general administrative proceedings (Ákr.), Article 40.
[61] E. Csatlós, *Az ügyfél és a hatósági döntéshozatal a digitalizáció korában*, 13(1) Pro Futuro 10–18 (2023).
[62] Gov. Decree 310/2023 (VII. 14.) Article 4; GREATS executive decree Article 134/R-134/S (preceding July 22, 2023).

administration's automated decisions due to similar informational deficiencies. As a result, automated decisions represent unfair procedures that are ill-suited for judicial review—not because of their automated nature, but due to the lack of proper individualisation in the decision-making process[63].

3.4. Crime Prevention and National Defence

Law enforcement, as a specific part of public administration, follows distinct practices and rules to maintain law and order in a state. Crime prevention is a crucial aspect of its activities, and the exploitation of available information plays a vital role. The use of AI in this field is, however, still in its infancy.

An essential part of integrated law enforcement is the collection of relevant information that can be obtained from civil and international databases. This filter-research work starts from the initial phase of the investigation, but by definition accompanies almost the entire detection and investigation process. There are many technologies in use by modern states; in Hungary, facial recognition system is used by default. Software generates a list of potential candidates (candidate list) from the photos available in the system, displaying the ones most similar to the searched face image. Subsequently, two independent face image analysts, unaware of each other's activities, individually select potential hits based on their professional judgement from the candidate list. The marked images are then forwarded to the requesting police agency[64].

The Robotzsaru (Robocop) program, initially introduced in 2001[65], is used to tackle information warfare. Later, Robotzsaru2000

[63] Based on the rapid evaluation of the research conducted by Erzsébet Csatlós under research permit no. 2024.El.XI.F.13/9. in the casefiles (including the automated administrative decision, the legal remedy claim and the judicial decision on the review) of the administrative division of the Szeged Court, Hungary. See also E. Csatlós, *A hatóság indokolási kötelezettségéről*, 17(1) Közjogi Szemle 41–43 (2024).

[64] Z. Fantoly, *Mesterséges intelligencia a büntetőeljárás nyomozási szakaszában*, *Acta* Universitatis Szegediensis: Forum: acta juridica et politica 51 (2022).

[65] E. Elekes, *Szervezetfejlesztés és vezetési funkciók összefüggéseinek vizsgálata egy konkrét államigazgatási szervnél* (PhD értekezés, Debreceni Egyetem, Gazdálkodástudományi Kar, Ihrig Károly Gazdálkodás és Szervezéstudományok Doktori Iskola 2014) 53, at https://dea.lib.unideb.hu/server/api/core/bitstreams/4480a0d6-21e9-42de-8eac-c36c370283f5/content (visited 20 May 2024).

(Robocop2000) became an integrated administration- and case-processing system allowing the storage of – and access to – all case documents in order to contribute to the efficient performance of police work, especially crime analysis tasks execution. It was the Netzsaru (Netcop) system that ensured the national availability of persons, events, objects and other data related to the case included in the criminal files recorded in the Robotzsaru system[66]. It could be accessed from any part of the country and it was the first national information system harmonised with the GDPR and expanded with photos, fingerprints and DNA fingerprints[67]. RobotzsaruNEO (RobocopNEO) places the user functions of the previous system on a new logical and physical architecture and adds new user and administration functions[68]. It is a current aim to incorporate AI into this system to support the work of investigative authorities to detect criminal groups. Furthermore, AI can support scene of the crime investigation in the digitalisation of traces, the preparation of the site inspection report, and the analysis of video and image recordings (such as the creation of a virtual space). In the future, given the appropriate legislative amendments, video analysis of witness interviews and the questioning of suspects could be carried out with the help of AI to infer the behavioural pattern (emotional state) of the interrogated person. In addition, minutes could be prepared based on automatic voice transcription, as well as the transcription of voice-based evidence, analysis of video recordings, (e.g. facial and movement analysis), and mapping of a given person's environment based on cell information[69].

4. Legal Aspects and Challenges to Reliance on AI

Just as there is no specific legislation on AI, neither are there any specific legal guarantees regarding AI use.

As for administrative proceedings, Act CL of 2016 on general administrative proceedings (Ákr.) co-exists with the GREATS (and the later Digital State Act) for the electronic aspects of the process.

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[66] F. Pilisi, "*Bűnügyi adatgyűjtés, különös tekintettel a raszternyomozásra*, 1(2) Büntetőjogi Szemle 43 (2012).

[67] J. Csorba, *Információ és állam* (2004) 230.

[68] Á. Sütő Ákos, *Robotzsaru (NEO) Integrált ügyviteli és ügyfeldolgozó rendszer információvédelmi lehetőségei*, 9(2) Hadtudományi Szemle 359–361 (2016).

[69] L. Hertelendi & Z. Hornyik, *Mesterséges intelligencia a köz szolgálatában. Interjú Hajzer Károly informatikai helyettes államtitkárral*, 10(1) Belügyi Szemle 212 (2022).

The basic principles, the outline of the course of proceedings and the procedural steps, rights and responsibilities of all parties and general legal remedy issues are covered by the Ákr. The specific aspects of e-administration, such as the principles of e-proceedings, rights and obligations of the parties, details of contacting the authority in an e-way, the issue of operational failure, the regulation on the bodies providing e-governance service are all covered by the GREATS.

In the case of automated decision-making, the Ákr. excludes the possibility of internal (administrative) legal remedies. Yet, within five days, the client has the right to submit request to follow the 'traditional way of proceedings'[70]. Furthermore, according to the general rules, decisions by public authorities are subject to judicial review[71].

The Ákr. obliges the competent authority to ensure the protection of personal data and qualified data and declare targeted and frugal data management[72]. However, the GDPR and the Act CXII of 2011 on the right to information self-determination and freedom of information aim to stand as background legislation with details on data management; certainly, in the event of a potential conflict of norms, the GDPR would prevail as an EU regulation[73].

Data sets with a potential multiplying effect have not yet fully realised their capacity to stimulate economic revitalisation. The *startup ecosystem* has only begun to develop recently, and Hungarian AI startups are not dominant in the world market. There is also room for improvement in terms of business culture. Both individuals and businesses lack the courage to embrace innovation and experimentation, which is a critical element in the adoption of new technologies[74].

In terms of new technologies and their accessibility, Fantoly highlights budget-related issues. If implementing programs is challenging and time-consuming, it not only fails to assist but may hinder the work of investigative authorities. For instance, until laptops are equipped with the latest software, system

[70] Ákr. Article 42.
[71] Ákr. Article 114.
[72] Ákr. Article 27.
[73] J. Wagner & A. Benecke, *National Legislation within the Framework of the GDPR Limits and Opportunities of Member State Data Protection Law*, 2(3) Eur. Data Protection L. Rev. 353, 358–61 (2016).
[74] AI Strategy, cit. at 2, 16.

interconnections are developed, and control of internet-based communications is established, discussing the effectiveness of significant Big Data analysis tasks or the efficiency of analysis and evaluation work remains premature[75].

Despite the presence of digitally advanced businesses, *paper-based operations are still primary* in many places, highlighting the need for enhancement in digital competencies. Hungary's *digital competence as a society* significantly lags behind the European average, requiring special efforts, particularly in connection with the introduction of AI in various sectors[76].

There is a looming danger that Hungary may become too dependent on global service providers, lacking the platform technology to confidently compete in future fields. It is important to consider that the user base for the Hungarian language is relatively narrow, making global markets less interested in high-quality Hungarian language processing. This could weaken the use of Hungarian in the digital age. Additionally, there is a risk of falling behind in global competition, primarily due to more intensive or efficient AI developments in offshore and nearshore countries, both in civil and defence technologies, compared to domestic efforts[77].

Cybersecurity has already become an important issue for the public administration after the millennium, and especially after 2010, when the e-Government and the municipal e-services began to evolve rapidly. Thus, cybersecurity became part of the public order and safety policies of the Hungarian administrative system[78]. In 2013, an act was adopted on the cybersecurity of the central and

[75] Z. Fantoly, *Raszternyomozás és mesterséges intelligencia*, 13(1) Forum: Acta Juridica et Politica 30 (2023); see also B. Veszprémi, "*Az elektronikus ügyintézés terjedésének gátjai az állami feladatellátásban*", 11(1) Új Magyar Közigazgatás 73 (2018).

[76] The smart city projects aim to improve the attractiveness and liability of small settlements with digital and smart solutions. See G. Sallai (ed.), *Az okos város (smart city)* (2018); B. Budai Balázs, *Smart governance, avagy az okos (ön)kormányzás alapjai* (2018) 23–30.

[77] AI Strategy, cit. at 2, 24. See also Digital Decade Country Report 2023 Hungary, available at https://digital-strategy.ec.europa.eu/en/library/country-reports-digital-decade-report-2023 (visited 20 May 2024).

[78] I. Hoffmann, *Cybersecurity of the Hungarian Municipal Administration: Challenges of a Fragmented System*, in K. Chałubińska-Jentkiewicz & I. Hoffman (eds.), *The Role of Cybersecurity in the Public Sphere – The European Dimension* (2022) 219.

local governments[79]. It has a centrally supervised system led by the Ministry of the Interior, and the central body of cybersecurity issues is one of the national secret service agencies. As for the weaknesses in the system, or the Achilles heels, as Hoffmann describes them, the fragmented spatial and sectoral structure of the e-administration can be interpreted as a potential cybersecurity threat. First, spatial fragmentation refers to the administrative structure[80]. Second, there has been no uniform identifier of people since the 1990s. However, this fragmentation has some advantages as well. Because these systems are separated, malevolent activities face difficulties: only separated systems could be attacked at once[81].

Overall, the examples introduced above seem to indicate the organic yet fragmented and ad-hoc nature of upgrading e-governance in Hungary. In these developments, AI seems to play an important but not central role.

5. Technological and Educational Aspects of AI Use

AI may support carrying out e-governance services with greater effectiveness, as long as they are based on cutting-edge technologies of the highest standards. Otherwise, the state might fail to serve its clients' (practically, its nationals') interests. The dire need for the highest quality AI technology to back e-governance services seems to be fulfilled in Hungary. The IT support and R+F activities backing numerous services – including text-to-speech, speech-to-text and chatbot services, the MIA terminals as well as those under the Digital State Act – are developed, deployed, and supported by Idomsoft Zrt. This private limited company was acquired by the state in 2012.

[79] Act L of 2013 on the electronic information security of state and local government bodies.

[80] Before the reforms of the second decade of the millennium, Hungary had a highly decentralised public administrative system. However, recent centralisation has shifted many local tasks to central authorities. Public services like education, health care, and social care, previously managed by municipalities, are now mainly run by central and territorial institutions. See I. Hoffmann, *Administrative Law in the Time of Corona(virus): Resilience and Trust-building*, 6(1) Pub. Gov., Admin. & Fin. L. Rev. 47 (2021).

[81] Hoffmann, cit. at 81, 220.

No publicly available document clarifies the exact AI technology that this company uses. The available descriptions[82], press releases[83] or service descriptions[84] suggest that they develop the software they use internally. Indeed, some of their developments gained publicity and were commended by the European Commission.[85]

As the majority of AI-supported services necessitate human contributions in decision-making, public servants need specific education. They are legally obliged to participate in advanced studies related to their job. The educational programs are provided by *Ludovika University of Public Service* in Budapest[86]. The educational programs aim to keep up with needs, so, as part of the education portfolio of 2023, there are programs to expand digital skills, with one specifically focusing on the introduction to the world of AI and cybersecurity, and the e-public administration course forms part of the traditional subjects. The AI Module is available to students enrolled in the general programme in political sciences (state studies) as well as to cybersecurity MSc students[87].

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[82] On the KIOSZK project, see *Mesterséges intelligenciával támogatott ügyintézési pont (KIOSK) kiterjesztése a kormányhivatalokra, illetve más külső ügyintézési helyszínekre*, https://kifu.gov.hu/projekt/mesterseges-intelligenciaval-tamogatott-ugyintezesi-pont-kiosk-kiterjesztese-a-kormanyhivatalokra-illetve-mas-kulso-ugyintezesi-helyszinekre/ (visited 4 July 2024).

[83] E.g. *Egyre hatékonyabban működik a mesterséges intelligencia az ügyintézésben*, NISZ Zrt., (26 January 2023), at https://nisz.hu/sajtoszoba/egyre-hatekonyabban-mukodik-a-mesterseges-intellig-d158 (visited 4 July 2024).

[84] E.g. *Csatlakozási és szolgáltatási szabályzat* (25 August 2022), at https://idomsoft.hu/wp-content/uploads/mia_csatlakozasi_szolgaltatasi_szabalyzat.pdf (visited 4 July 2024).

[85] Idomsoft's 'Anomaly detection in e-government administration' solution was selected for a case study. See L. Tangi, M. Combetto, J.M. Bosch, A.P. Rodriguez Müller, *Artificial Intelligence for Interoperability in the European Public Sector: an exploratory study* (2023), doi:10.2760/633646, JRC134713, 93.

[86] Act CXCIX of 2011 on civil servants, Article 80; Gov. decree 273/2012. (IX. 28.) on training of civil servants; see P. Princzinger & L. Kisfaludy, *A „jó állam" alapköve: a közszolgálati továbbképzés rendszere*, 3(1) Pro Publico Bono – Magyar Közigazgatás 139–147 (2015).

[87] *Mesterséges Intelligencia Modul a jövő közigazgatási szakembereinek* (12 February 2024), at https://www.uni-nke.hu/hirek/2024/02/12/mesterseges-intelligencia-modul-a-jovo-kozigazgatasi-szakembereinek (visited 4 July 2024).

6. AI in Legal Literature

The focus of Hungarian researchers is predominantly on *exploring assumptions and potential areas of application, often exploring foreign states' practices*[88] and their potential applicability in our country[89], rather than addressing the current state of AI in Hungarian legal practice. This is infrequent and often presented by practitioners based on their experiences in a less scholarly manner[90]. This is mainly due to the technology not being widespread in practice.

Discussion on simplifying and streamlining workflows in traditional public administration primarily revolves around identifying potential areas for AI application[91], considering the phenomenon as a part of the historical evolution of the rationalisation of the work process[92], expressing doubts on the context of the centralised nature of using AI and local government autonomy[93], or exploring the potential benefits of using smart contracts and blockchain technology in public administration, for instance[94]. Automated decision-making in public administration

[88] G. Nyáry, *Kiber geopolitika - Mesterséges Intelligencia alkalmazások az államigazgatás külpolitikai alrendszereiben*, 13(1) Új Magyar Közigazgatás 31–38 (2020).

[89] Á. Kalmár, *Innovációs javaslatok a határrendészeti szolgálati ág részére a tömeges méretű migráció kezelésében*, 1(1) Rendőrségi Tanulmányok 80–89 (2018); D. Ambrózy et alii, *Drónok alkalmazása a rendvédelemben, különös tekintettel a mesterséges intelligencia-módszerekre a dróntechnológia területén*, 9(2) Rendvédelem 35–42 (2022).

[90] E.g. physicist N. Fenyvesi, *Robotszoftverek alkalmazása a Magyar Államigazgatásban*, 13(3) Új Magyar Közigazgatás 30–36 (2020).

[91] P. Darák, *A mesterséges intelligencia a közszférában*, 13(4) Új Magyar Közigazgatás 58–59 (2020).

[92] A. Torma András & B. Szabó, *Egy közigazgatási sci-fi, vagy a jövő valósága? Úton 2030 felé. Hipotézisek a holnap közigazgatási hatósági eljárása általános szabályainak gyakorlatához*, 2(2) KözigazgatásTudomány 118–137 (2022).

[93] I. Hoffman & A. Bencsik, *New Ways of Providing Public Services: Platforms of Service Provision and the Role of Artificial Intelligence: In the Light of the Development of the Hungarian Public Administration*, in S. Benković, A. Labus, M. Milosavljević (eds.), *Digital Transformation of the Financial Industry, Contributions to Finance and Accounting* (2023) 181.

[94] Z. Czékmann, L. Kovács, E. Czibrik, *Okos szerződések, blokklánc-technológia és egy gondolatkísérlet mindezek alkalmazására a közigazgatásban*, 13(1) Pro Futuro 13–14 (2023).

gained limited attention, with only a few authors exploring this area[95].

Futó has extensively studied the application of AI in public administration, categorising it into two groups: rule-based and machine learning. An essential consideration is how decisions are justified, particularly when employing machine learning algorithms, which operate statistically, making predictions based on data without explicit programming. However, the lack of transparency in their results, often referred to as a "black box," poses challenges. In contrast, rule-based expert systems simulate human decision-making by solving complex problems through inference, employing "if, then" conclusions[96]. Authority procedures, bound by normative rules, can benefit from well-maintained knowledge bases that align with legislative changes and legal practices. A properly written program, considering legislation and known facts, aids the authority in decision-making by generating patterns based on entered data[97].

Futó's research emphasises the inference chain-based decision-making, which functions more like a template, serving as a decision support system for administrators. While decision-making through such systems can enhance uniformity in case law, challenges arise regarding sensitivity in handling complex discretionary powers and fairness. The future raises questions about the system's ability to handle intricate cases, balancing the objective application of law with the need to address individual problems. Developing citizens' digital competencies is crucial as authority procedures evolve, and individuals must understand legal "if, then" statements and the reasons behind onerous decisions. Ensuring access to knowledgeable legal assistance and thorough justifications is vital, especially given data protection concerns and the responsibilities associated with the digital

[95] E. Ritó & Z. Czékmann, cit. at 54, 104–118; Z. Czékmann, G. Cseh-Zelina, E. Ritó, *Az automatikus döntéshozatal helye és szerepe a hatósági eljárásban*, 2(2) KözigazgatásTudomány 35–47 (2022); E. Csatlós, cit. at 61, 10–18.

[96] I. Futó, *Mesterséges intelligencia: de miért nincsenek szakértői rendszerek a magyar közigazgatásban?*, 13(4) Új Magyar Közigazgatás 35 (2020).

[97] I. Futó, *Mesterséges intelligencia-eszközök – logikai következtetésen alapuló szakértő rendszerek – alkalmazása a közigazgatásban, hazai lehetőségek* 49(7-8) Vezetéstudomány/Budapest Management Review 43–47 (2018).

management of personal data, emphasising the need for legislators to refine the legal remedy framework[98].

In criminal matters, the investigative authorities have a pivotal role, so simplification and work-relief are also worth mentioning here. There is an ongoing discussion about decision-making and its connection to specific fundamental rights[99]. It has been remarked that the application of algorithms within criminal justice is not inherently evidential; technology alone does not determine their validity[100]. However, AI, while evaluating input data, identifies cases where there might be grounds for postponing proceedings, considering factors such as the nature of the offence or the personal circumstances of the perpetrator. In this process, assistance can be derived from the emerging field of predictive policing, where AI-based software could be introduced by incorporating modern technical solutions in the work of investigative authorities[101]. While the theoretical discussion on the potential responsibility of public administration for AI use is ongoing, the current focus is mainly on issues such as sharing wrong information[102]. In criminal law, the predominant topic centres around criminal liability associated with self-driving vehicles[103].

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[98] FL, Article VI (2); Act CXII of 2011 on the right to information self-determination and freedom of information, Article 20; see *A Nemzeti Adatvédelmi és Információszabadság Hatóság ajánlása az előzetes tájékoztatás adatvédelmi követelményeiről* (2015), at https://naih.hu/files/tajekoztato-ajanlas-v-2015-10-09.pdf (visited 20 May 2024) 4–13; B. Hohmann, *A mesterséges intelligencia közigazgatási hatósági eljárásban való alkalmazhatósága a tisztességes eljáráshoz való jog tükrében*, in B. Török & Z. Ződi (eds.), *A mesterséges intelligencia szabályozási kihívásai: Tanulmányok a mesterséges intelligencia és a jog határterületeiről* (2021) 413; E. Csatlós, cit. at 61, 18–21.

[99] K. Karsai, *Algorithmic Decisions Within the Criminal Justice Pipeline and Human Rights*, in A. Sözüer (ed.), *9. Uluslararası Suç ve Ceza Film Festivali "Sanal Dünyada Adalet": Tebliğler* (2022) 101–126.

[100] K. Karsai, *Algorithmic Decisions Within the Criminal Justice Ecosystem and their Problem Matrix*, 92(1) Int'l Rev. Penal L. 13 (2021).

[101] Z. Fantoly & C. Herke, *A mesterséges intelligencia a hatékonyabb büntetőeljárás szolgálatában*, 24(4) Magyar Jog 225, 226, 228 (2023); C. Herke, *Mesterséges intelligencia a büntetőjogi döntéshozatalban*, 78(4) Jogtudományi Közlöny 170–175 (2023).

[102] T. Bicskei, *A mesterséges intelligencia közigazgatásban való felhasználásával okozott kár*, 3(1) KözigazgatásTudomány 99–114 (2023).

[103] K. Karsai, B. Miskolczi, M. Nogel, "*Hungarian Report on Traditional Criminal Law Categories and AI*, 94(1) *Rev. int. dr. pénal* 263 (2023).

The development and utilisation of specific state registers and new tools, especially drones, to enhance the execution of specific tasks instead of relying on the human workforce, is a recurring theme in legal literature concerning disaster management[104], investigations[105], and state defence[106].

7. AI in Practice: Problems So Far

Public administration plays a crucial role in ensuring that private actors operate within the bounds of the law. Often the illegal use of AI is revealed in their exercise of supervisory authority.

AI is extensively employed in the private sector, leveraging various types of personal data. The *ex officio* procedures of the *Hungarian National Authority for Data Protection and Freedom of Information* (NAIH) as a data protection authority play a vital role in uncovering potential misuse/dangerous use of AI, or rather the lack of ensuring the basic right related to data management in most cases. The legal remedy against the decision of the NAIH is the possibility of brining an administrative claim before the *Fővárosi Törvényszék* (Municipal Tribunal). This court has exclusive competence[107].

Complaints raised against reliance on AI are not quantifiable with any precision. However, a few noteworthy cases have emerged, shedding light on concerns. While they might not be termed 'leading cases', it could simply be a matter of time before such cases gain prominence and set precedents in the legal landscape.

7.1. No AI, No Legal Guarantees for Individuals?

It is common practice to record calls when people speak to service providers, with only a brief automated notice informing them of this. In *Service Provider v. NAIH*, the Municipal Court had

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[104] L. Egyed, *Drónok használatának lehetőségei a katasztrófavédelemnél, különös tekintettel a tűzvédelmi prevencióra és a kárelhárításra*, 8(3) Védelem Tudomány 124–141 (2023).

[105] A. Déri, *Drónok alkalmazhatóságának lehetőségei a rendőrségen* 11(2) Rendvédelem 25–26 (2022).

[106] L. Gajdács & G. Major, *Katonai célú drónok fejlesztése a jelenkorban, a jövőt vizionálva*, in L. Földi (ed.), *Szemelvények a katonai műszaki tudományok eredményeiből III.* (2022) 101–120.

[107] Act I of 2018 on the administrative court procedure Article 3 (a) aa).

to rule on the illegal use of recorded customer service calls and made a declaration on the applicability of the GDPR for the practice[108].

The recorded material from customer service calls is analysed automatically, taking into account the emotional states of both the calling customer and the customer service employee, along with other characteristics of the conversation. The results of this AI analysis are then used to make informed decisions on which customers require a callback. At the beginning of the customer service calls, no information was provided to the effect that software was being used or data being processed for voice analytics purposes because the options for verbal information were said to be limited, and the technical features excluded the possibility of raising objections other than by disconnecting the call. Also, the service provider denied the applicability of the GDPR to the present case, claiming that AI was not used and rejecting the accusation of automated decision-making by arguing that the analysis results were obtained through human intervention and interpretation.

The NAIH determined that both actors in the call – customer service employees and third parties – can be identified in the examined system. The NAIH referred to the judgement C-582/14 of the Court of Justice of the European Union[109] and established that the emotional state recognised by the software and the data associated with the caller ID and phone number constitute personal data linked to an individual. Consequently, the GDPR applies to data management using the software.

Relying on the information placed on the website of the company developing the software and the Hungarian website of the service provider, which stated that the software is capable of automatically evaluating received and begun calls based on predetermined rules, the NAIH was convinced that the software used for the automatic processing of personal data via AI, making Article 21 GDPR applicable to the data processing in question.

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[108] NAIH-5161/2021, available at https://www.naih.hu/hatarozatok-vegzesek?download=517:mesterseges-intelligencia-alkalmazasanak-adatvedelmi-kerdesei (visited 20 May 2024); Fővárosi Törvényszék 105.K.701.428/2022/13, available in the database at https://birosag.hu/ugyfeleknek/birosagi-hatarozatok-gyujtemenye (visited 20 May 2024).

[109] Case C-582/14 *Patrick Breyer v Bundesrepublik Deutschland* [2016] ECLI:EU:C:2016:779, para 42–49.

Additionally, Article 4(4) GDPR on profiling must also be applied, as dissatisfied customers are categorised for recall based on keywords and emotions.

In examining the right to be informed and the right to object, it was found that, with voice analysis and the automatic evaluation of calls, as well as the subsequent potential for a callback, data subjects did not receive any information at the beginning of the conversation. The service provider, under Article 13 GDPR, failed to provide adequate information, apart from the legal basis and did not comply with Article 13 GDPR, offering incomplete indications of the purpose. The complete absence of the right to object constitutes a breach of Article 21 GDPR, rendering consent unacceptable as a legal basis.

7.2. No Consent, No Service: The Case of Forced Consent in Two Typical Situations

Individuals may find themselves in situations where they need to use a service or wish to use it, but they are required to provide their data without clarity on its intended use. The use of voice recording, mandated by legal obligations in the case of complaints and otherwise based on the customer's decision, is an integral aspect of telephone customer service. However, it poses a significant detriment to the interests of telephone customer service if it is not made known to those who do not wish to accept all data processing related to it, details of which remain completely unknown.

In the *NAIH v. Financial Institution*[110], the investigation focused on whether the financial institution automatically analysed recorded customer service calls and informed the individuals involved. The website mentioned recording and analysis only briefly. The call analysis aimed to improve call selection for employees, but the characteristics and results of the evaluation were not disclosed to customers. The institution argued that the data could not be linked to specific individuals, claiming no profiling was involved. However, NAIH stated that using such data without customers' knowledge and consent violated GDPR Article 6 (4). The analysis also included employee voices for

[110] Fővárosi Törvényszék 105.K.701.428/2022/13/alphat in case NAIH-7350/2021, at https://www.naih.hu/hatarozatok-vegzesek/file/517-mesterseges-intelligencia-alkalmazasanak-adatvedelmi-kerdesei (visited 20 May 2024).

performance pay, raising concerns about their ability to protest due to their employment status. NAIH stressed the need for stronger guarantees and careful planning in monitoring employees, highlighting the institution's failure to address legal and ethical issues. According to GDPR Article 24(1), the institution should have ensured maximum protection of the stakeholders' rights and freedoms, which it did not.

In the case *NAIH v. Festival Organiser*[111] the authority investigated the legality of the data management practices implemented during the entry practice at events run by the organiser.

Criticism has been directed at the entry procedure, where guests' ID cards were scanned. Moreover, concerns have been raised about inadequate information for individuals regarding the circumstances of data management, including the purpose and duration of ID card copying and its intended use.

During registration at the venue for events organised by the data controller, the data subject was required to provide proof of identity using an official document with a photo. The data controller read, recorded, stored, and managed the data extracted from the personal identification document, while also making video and audio recordings of the data subject, which were similarly recorded, stored, and managed. The organiser retained the right to invalidate the wristband and deny entry to the event if the individual did not consent to data processing. According to the organiser, the individuals had a real choice of whether to subject themselves to the entry exercise or not as it was their choice to buy a ticket and participate in the festival. As buying a ticket is not an obligation, they have their free will. Such a strict system was claimed to be necessary to maintain the security of the people, and it could also be potentially useful in collaboration with the local police or perhaps with secret service agencies. The organiser clarified that a specific algorithm is used for screening individuals who may pose a threat. As for personal economic interest, the aim was the personalisation of the tickets to avoid abuse.

In the view of the NAIH, consent of the individual cannot be considered a suitable legal basis in cases where, without giving consent, another independent data management or service used

[111] Case NAIH/2019/55/5, at https://www.naih.hu/hatarozatok-vegzesek/file/165-a-sziget-zrt-altal-szervezett-rendezvenyeken-folytatott-beleptetessel-osszefuggo-adatkezelesek (visited 20 May 2024).

with payment cannot be enforced. According to the Authority's point of view, the data subject *had no real choice* during the data processing related to the entry and also, the huge amount of personal data including information on the visitors' country of origin, nationality, and gender is not required and unnecessary for reducing abuse of the tickets. In sum, this practice was against the principle of data saving and targeted data management. Furthermore, the interests mentioned regard the public interest, the enforcement of which is not the duty of the organiser.

7.3. Market Surveillance or Lifesaving Intervention?

It is acknowledged that AI is extensively utilised in various aspects of healthcare, and it has its risk concerns[112]. However, there is a specific responsibility to regulate medical equipment accessible to the general public, exposing ordinary consumers to the risk of misplaced trust.

In response, the National Pharmaceutical and Food Health Institute (OGYÉI) took measures to suspend the use and advertising of medical devices. Additionally, the Institute prohibited the use of these devices, that lacked appropriate medical professional characteristics, addressing concerns related to their illegal distribution. During a product presentation, a blood pressure metre transmitted signals to a computer program, allowing real-time observation of oscillometric curves on the screen. Afterwards, the program's algorithm analysed the signals to calculate blood pressure and arterial function parameters, which were displayed in the 'results' menu; the user's manual recommended using the average of three consecutive measurements for accurate cardiovascular prognosis assessment. The authority's standpoint was that presenting all these parameters and measurements results in curves and tables *beyond the expected knowledge, understanding, and evaluation capabilities of laypersons*, even with training provided by the manufacturer. Moreover, the restriction of use requires a decision based on knowledge and consideration of the patient's previous medical history, which

[112] T. Davenport & R. Kalakota, *The potential for artificial intelligence in healthcare*, 6(2) Future Health J. 94–98 (2019); M. Zorkóczy, *A mesterséges intelligencia egészségügyi jogi és etikai dimenziói*, 25 *MTA Law Working Papers* (2021), at https://jog.tk.hu/mtalwp/a-mesterseges-intelligencia-egeszsegugyi-jogi-es-etikai-dimenzioi?download=pdf (visited 20 May 2024).

cannot be anticipated by a lay user[113]. Therefore, the AI-based evaluation of medical data is not suitable for everyday use by ordinary people without proper medical surveillance; a medical device cannot replace a physician.

[113] Fővárosi Törvényszék 109.K.702.287/2021/16/h, at ttps://birosag.hu/ugyfeleknek/birosagi-hatarozatok-gyujtemenye (visited 20 May 2024).