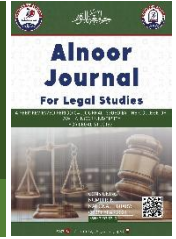




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# Artificial Intelligence and Judicial Reform: A Path to Modernizing Administrative Courts in Iraq - A Comparative Study with the UAE Model

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### Abstract

The world is witnessing an accelerated digital transformation that has forced judicial systems to reconsider their procedural and organizational structure to keep pace with the requirements of the digital age. In this context, artificial intelligence is one of the most prominent technical tools capable of bringing about real reform in the performance of administrative courts, by speeding up procedures, achieving consistency in judgments, and enhancing transparency. This study focuses on the status of administrative courts in Iraq through the structural and procedural challenges it faces, the slow resolution of cases, the backlog of litigation files, and the weakness of the digital infrastructure. Questions arise about the readiness of the Iraqi judicial system to embrace AI as a correctional tool, and the compatibility of this with the existing legal and institutional environment. The study uses a comparative approach to look at the experience of the United Arab Emirates, which is a model for how to use artificial intelligence in justice institutions. It examines the legislative and regulatory structure in both countries, and the extent to which the UAE has succeeded in integrating these technologies into the work of administrative courts, while drawing lessons applicable in the Iraqi context. The results of the research concluded that artificial intelligence represents a strategic tool for reforming the administrative judiciary, allowing the improvement of the quality of judgments, speeding up litigation, and reducing self-interference in the decision-making process. The study presented a set of legislative and institutional recommendations to develop the judicial structure in Iraq in line with international standards for digital transformation in the judiciary.

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## الذكاء الاصطناعي والإصلاح القضائي: طريق لتحديث المحاكم الإدارية في العراق - دراسة مقارنة مع نموذج الإمارات



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### المستخلص:

يشهد العالم تحولاً رقمياً متسارعاً أجبر الأنظمة القضائية على إعادة النظر في هياكلها الإجرائية والتنظيمية لمواكبة متطلبات العصر الرقمي. وفي هذا السياق، يُعدّ الذكاء الاصطناعي من أبرز الأدوات التقنية القادرة على إحداث إصلاح حقيقي في أداء المحاكم الإدارية، من خلال تسريع الإجراءات، وتحقيق اتساق الأحكام، وتعزيز الشفافية. تركز هذه الدراسة على وضع المحاكم الإدارية في العراق، من خلال التحديات الهيكلية والإجرائية التي تواجهها، وبطء البتّ في القضايا، وتراكم ملفات التقاضي، وضعف البنية التحتية الرقمية. وتبرز تساؤلات حول مدى استعداد النظام القضائي العراقي لتبني الذكاء الاصطناعي كأداة إصلاحية، ومدى توافقه مع البيئة القانونية والمؤسسية القائمة. تستخدم الدراسة منهجاً مقارناً لدراسة تجربة دولة الإمارات العربية المتحدة، التي تُعدّ نموذجاً لكيفية استخدام الذكاء الاصطناعي في المؤسسات القضائية. وتفحص الدراسة الهيكل التشريعي والتنظيمي في كلا البلدين، ومدى نجاح الإمارات في دمج هذه التقنيات في عمل المحاكم الإدارية، مع استخلاص الدروس المستفادة التي يمكن تطبيقها في السياق العراقي. خلصت نتائج البحث إلى أن الذكاء الاصطناعي يمثل رافعة استراتيجية لإصلاح القضاء الإداري، مما يسمح بتحسين جودة الأحكام، وتسريع إجراءات التقاضي، والحد من التدخل الذاتي في عملية صنع القرار. وقدّمت الدراسة مجموعة من التوصيات التشريعية والمؤسسية لتطوير الهيكل القضائي في العراق بما يتماشى مع المعايير الدولية للتحول الرقمي في القضاء.

**الكلمات المفتاحية:** الإصلاح القضائي، الذكاء الاصطناعي، المحاكم الإدارية، العدالة الرقمية، النظام القضائي.



## 1. Introduction:

In light of the rapid changes happening in the digital era of contemporary world, integration of artificial intelligence technologies in judicial structure is one of the strategic paths that are aimed to develop the justice institutions especially in countries that have structural and procedural challenges like that of the Republic of Iraq. AI has ceased to be a technical tool and is now a key player in promoting transparency, accelerating judicial proceedings, and bringing more consistency in sentencing, particularly in the administration courts, which are one of the key pillars of guaranteeing the administrative rights of citizens (Shevchuk et al., 2023, p. 18).

The importance of this research lies in the critical analysis of the systemic bottlenecks which are currently paralyzing Iraqi administrative tribunals. These impediments include serious docket congestion, lengthy procedural delays and a very fragmented digital infrastructure. By extruding contrasts in these local troubles and overlooked potential in the algorithmic adjudication, the examination proposes reasonable reformation framework. This framework borrows particularly from comparative international paradigms in that it specifically emphasizes the United Arab Emirates (UAE) as a vanguard jurisdiction in terms of judicial digitization and AI deployment (Cheung, 2024, p.3).

While the integration of AI with the world's judicial bodies is becoming a standard, Iraqi administrative justice system suffers from severe infrastructural deficits. Beyond hardware limitations, there is also a large legislative gap on how the legal technologies should be regulated in connection with the fact that the working force is also more or less untrained in algorithmic management. Consequently, this harsh reality brings about some fundamental research questions on the true feasibility of implementing AI inside Iraq's current legal ecosystem, and how such kind of implementation could be structurally compliant with, or variant from the established UAE prototype.

Methodologically speaking, this is a deconstructed inquiry which looks in the twin lenses organization architecture and technical preparedness in Iraqi administrative courts on operation reality. The main goal is to examine the institutional elasticity needed

for absorbing the present-day digital transformations. Furthermore, it measures the acceptability of automated judicial tools in light of existing laws and statutes in Iraq without compromising the integrity of the law. In order to fill the gap between theory and practice, a comparative analysis is conducted between the Iraqi and Emirati models in an attempt to identify the structural catalysts and institutional impediments that exist in both jurisdictions.

Ultimately, the article puts forward a list of specific legislative and administrative reforms aimed at recalibrating Iraqi administrative courts in line with international standards of digital excellence. The results suggest that assimilation of AI is not only a procedural upgrade, but it really is a major catalyst for systemic reform. It has a direct impact on overcoming backlogs in the dockets, expediting the resolution of disputes, and strengthening the legal certainty. Crucially, the use of judicial data analytics can be demonstrated to strengthen the independence of the institutions by reducing the level of subjective intervention by humans in the administration of justice. Based on the UAE experience, the current project provides an operational roadmap for the modernization of the Iraqi administrative judiciary, aligning it with the requirements of the digital era as well as with the universal principles of the judiciary.

## 2. The Theoretical Basis for Judicial Reform and Artificial Intelligence

The basic thoughts of the research, for example, the consequences of artificial intelligence for the advancement of courts will be described here. The possibility of including these technologies in the system of administrative courts will be noted in this regard.

### 2.1 The Concept of Artificial Intelligence

An interdisciplinary area of computer science is Artificial Intelligence. It focuses on developing computer systems and robots which can perform tasks that human minds usually do. (Russell & Norvig, 2021, p. 1) AI, which is at the intersection of fields like cognitive psychology, neuroscience, linguistics, and philosophy, is a defining technology of the 21st century because it covers a wide range of capacities, including language comprehension, problem-solving,



reasoning, learning, and perception. The field is both theoretically deep and extremely difficult as a result of this convergence. (Riva et al., 2024, p. 21).

Despite its widespread use, AI still lacks a universally accepted definition, which is a reflection of its constantly changing nature and range of approaches. The European Commission defines AI in a widely cited way as follows: Technological systems that demonstrate intelligent conduct by operating inside their surroundings and seeking some degree of autonomy in order to carry out actions that achieve specified goals. (European Commission, 2018, p. 6).

Although AI's intellectual roots may be found in formal logic and classical philosophy, its institutional base was formed at the 1956 Dartmouth Conference, which is widely seen as the founding event of the field. "Good Old-Fashioned AI" (GOFAI), which is based on symbolic logic and rule-based reasoning, was the focus of initial studies. (Veisdal, 2019, p.2). Statistical and data-driven techniques, such as machine learning and deep learning, have come to rule the current era, while expert systems flourished in the years that followed. (Sarker, 2021, p. 2).

AI should be viewed as a paradigm-shifting framework that forces a reevaluation of the very nature of intelligence, rather than only as a technological advance. A rigorous, interdisciplinary, and ethically informed methodology to the creation and deployment of AI systems is essential as they become more and more integrated into society's infrastructure. (Floridi et al., 2018, p. 690). This research will give Iraqi legislators and supporters of legal reform a plan for the ethical incorporation of AI into the judicial system. It upholds legal values like transparency, accountability, and procedural fairness while promoting reforms.

## 2.2 Judicial Reform: Objectives and Challenges

Judicial reform is a set of policies and measures aimed at enhancing the effectiveness, independence and credibility of the judicial system, in order to achieve prompt justice and meet the aspirations of society in the rule of law. It is not only about changing legislation, but involves reform of infrastructure, human resources and procedural systems. Judicial reform is one of the key posts in the construction of

the rule of law and strengthening of confidence in justice institutions. Keeping in view the global digital transformations, it is required to rethink the conventional judicial structure, and to adopt modern tools like artificial intelligence to enhance performance and to attain a swift dispensation of justice (UNESCO, 2024, p. 2) Judicial reform aims at achieving a certain set of core aims, most notably:

1. **Strengthening the independence of the judiciary:** The independence of the judiciary is a fundamental guarantee of the impartiality of judgments and the reform aims to immunize judges from political and social influences to give the judgments in accordance with the law only (Shaman, 1996, p. 5).
2. **Increasing the efficiency of judicial performance:** By simplifying procedures and decreasing the time for processing cases, the quality of judicial service can be improved and the volume of backlog of files can be reduced (Ali et al., 2025).
3. **Achieving digital justice:** Digital transformation facilitates accessibility to citizens for judicial services and reduces the disparity of opportunity for litigation and promotes access to justice before the law. (Katsch & Rabinovich-Einy, 2017, p. 41).
4. **Improving transparency and accountability:** By allowing the public to be informed of the progress of procedures and standards, community oversight of the performance of the judiciary can be strengthened and confidence in its justice can be increased. (Irvita & Asriani, 2025, p. 4).

Judicial reform is a challenging process, which requires a delicate balance between the need to modernise the legal system and the need to keep the basic concepts of justice intact. With the introduction of artificial intelligence and digital technology in the legal space, new problems have emerged that require careful legal and ethical consideration. (Socol de la Osa & Remolina, 2024, p. 3).

1. **Cultural and institutional resistance to change:** Internal resistance by some judges and judicial officials is one of the major obstacles to change. Traditional judicial culture tends to be suspicious of new technologies, in case this leads to loss of control



or impacts the independence of judicial decisions. (Socol de la Osa & Remolina, 2024, p. 4).

2. **Weak digital infrastructure:** In many countries, courts still rely on rudimentary paper or electronic systems, hindering the application of smart solutions such as automated case management or the use of artificial intelligence to analyze case law. (World Bank, 2022, p. 1).
3. **Absence of legislative frameworks regulating modern technologies:** Despite the expansion of the use of artificial intelligence, many judicial systems lack clear laws regulating its use, especially with regard to legal liability, data protection, and the rights of litigants. (Balakrishnan, 2024, p. 12).
4. **Ethical and human rights challenges:** which include algorithmic bias where AI systems result in biased decisions as a result of unbalanced training data. In addition to the lack of transparency through what is known as the 'black box' in artificial intelligence, where it is difficult to explain how decisions are made. In addition to legal responsibility, which is a very important issue, who bears responsibility in the event of a wrong judgment from a smart system? (Socol de la Osa & Remolina, 2024, p. 5).

### 2.3 The Complementary Relationship Between AI and Judicial Reform

The entry of artificial intelligence (AI) technologies into the global judicial mechanism where it is no longer considered a mere technical device but a part of a reform plan for the efficient, transparent and accessible access to justice is causing a dramatic shift in the system.

1. **Artificial intelligence as a correctional tool:** Artificial intelligence plays a role in handling conventional issues of judicial systems, such as slow procedures, judicial backlog, and disproportionate sentences. Through techniques like judicial data analysis, sentencing forecasting and natural language processing (NLP) the quality of judicial decisions can be enhanced and streamlined. (Ejjami, 2024, p. 2).
2. **Enhancing transparency and accountability:** AI technologies have made it possible to track and analyze judicial decisions, improving transparency and minimizing individual biases. The role of interpretation in understanding the magistrate also

helps in the construction of interpretive models for decisions that help in an increase of public confidence in the judiciary. (Contini, Ontanu, & Velicogna, 2024, p. 3).

3. **Integration with legislative and institutional reform:** AI cannot achieve its goals without a supportive legislative and regulatory environment. Judicial reform includes the modernization of laws, building human capacity, and developing digital infrastructure, elements that complement the role of artificial intelligence and provide it with an effective ground. (Contini, Ontanu, & Velicogna, 2024, p. 4).
3. **Administrative Judiciary in Iraq: Structure and Challenges**

The administrative judiciary is one of the cornerstones of the administrative justice system in Iraq, and constitutes an essential part of the formations of the State Council, which is an independent judicial body under the State Council Law No. 65 of 1979 and its amendments. This body is entrusted with the task of settling administrative disputes, ensuring the application of the principle of legality and the protection of the legal rights of individuals and institutions vis-à-vis the administrative authority. (Ahmed, Khalaf, & Hussien, 2024, p. 133). The administrative judiciary in Iraq is divided into three specialized courts, representing the organizational structure that determines the degrees of litigation and the areas of jurisdiction, and they are as follows:

- a. **Administrative Court:** Established under the Second Amendment to the State Shura Council Law. It is competent to consider the validity of administrative orders and decisions issued by state and public sector employees, and constitutes the first entrance to administrative litigation procedures. (Ahmed, Khalaf, & Hussien, 2024, p. 134).
- b. **Personnel Court:** Established by the Fifth Amendment to the same law, it adjudicates employment disputes that arise between employees and government institutions. It is also competent to hear disciplinary appeals related to work conduct and employment rights.
- c. **Supreme Administrative Court:** It is the highest administrative judicial body in Iraq, and was established by Law No. (17) of 2013. This court is competent to hear appeals in cassation against the decisions of the lower administrative courts, as well as



to hear conflicts of jurisdiction between the various administrative courts. This court plays a supervisory role that enhances the independence of the administrative judiciary and provides advanced legal guarantees to the parties to the conflict.

It should be noted that the formation of the administrative judiciary in Iraq is the result of a series of legislative amendments aimed at building a judicial system specialized in settling administrative disputes. This judiciary took place in the framework of the Council of State which exercises its powers in its different formations by law. This composition reflects the state of Iraq's transition from a unified system of judiciary to a dual system. The administrative judiciary shall have the autonomy functional and structural. However, this transformation is still faced with structural and legislative challenges as illustrated below:

1. **Legislative deficiencies and multiple legal references:** Still embedded in the old legislation, the structure of legal regulation of the administrative judiciary in Iraq is still based on the Shura Council Law No. (65) of 1979 and its amendments, as the main legal source. This law is seriously lagging behind present administrative and technological developments. The absence of a unified law for administrative litigation procedure leads to divergent judicial interpretation and the effectiveness of the administrative judiciary to dispose of contemporary disputes.
2. **The weakness of institutional and functional independence:** despite the constitutional texts that emphasize the independence of the judiciary, the administrative judiciary does not have sufficient financial and administrative independence, which makes it vulnerable to political influences, especially in issues that affect the interests of government agencies. This negatively affects the neutrality of the administrative judge and the confidence of the litigants in justice.
3. **The limited geographical spread and the weak infrastructure:** Administrative courts are concentrated in a limited number of governorates. In the center's government there is only one court in Baghdad. As for the Kurdistan Region, it is in Erbil

and in Sulaymaniyah, and an administrative court was recently established in Dohuk Governorate. The lack of the presence of these courts limits the possibility of citizens reaching administrative justice, especially in rural and remote areas. The infrastructure of the courts suffers from a lack of technical equipment and specialized cadres. (Omer, S. H., & Saeed, D. A., 2019, pp 400-405).

4. **The absence of digital transformation and modern technologies:** The administrative judiciary continues to depend on traditional paper procedures, in the absence of electronic systems to manage cases or to submit cases. This delay in digital transformation leads to slow procedures and accumulation of issues, and makes it difficult to integrate artificial intelligence tools in the near future. Citizens in need of government services must be physically present at government offices, with hard copies of forms and other documents... It is a frustrating task that can sometimes take months. (Chibani, 2024, p. 2)
5. **The weak legal culture of citizens:** The Iraqi citizen suffers from a lack of legal and administrative awareness, which limits his ability to resort to the administrative judiciary to defend his rights. The absence of legal awareness programs exacerbates this problem, and leads to the reluctance of individuals to use this legal path. (Kamil, 2023, p. 2).
6. **The problem of implementing judicial rulings:** One of the most prominent challenges facing the administrative judiciary is the failure of some administrative authorities to implement the rulings against them, which weakens the prestige of the judiciary and undermines the principle of the rule of law. Studies have shown that the legal means available to ensure implementation are still not effective. In other words, the administration's failure to implement and respect the authority of administrative rulings issued against it is one of the most prominent problems raised in the administrative law, which affects the prestige of the administrative judiciary and causes harm to the convicted in spite of the availability of some legal means...

As a result, the literature in recent years has implied that the administrative judiciary of Iraq is facing complex structural and procedural problems that require far-reaching multidimensional reform. This



reform comprises the adoption of digital transformation as a strategic need option, the modernisation of the legislative framework in compliance with the standards of justice today and the improvement of the autonomy of the judicial organisations to ensure their impartiality and efficiency. (Iraq Watch Group, 2025, p. 4).

Spreading legal culture among the citizens and activating the mechanisms for the implementation of the judicial ruling are fundamental conditions for restoring public confidence in this vital institution. From this view, application of the AI technologies in the legal system is perceived as a positive development in the direction of improving the functioning of institutions, but the success of this trend is still subject to the surmounting of current structural barriers. (Zalnieriute, 2021, p. 3).

The fast advancement of artificial intelligence technologies has caused a paradigm change in judicial systems all over the world, as some courts have started to implement smart tools with the goal of increasing efficiency, expediting processes and improving transparency. From this perspective, the role of AI is played up as a possible reform mechanism of the administrative judiciary in Iraq, particularly in view of the excessive reliance on paper-based processes, the backlog of cases and the unequal quality of judicial decisions. (Ahmed et al., 2020, p. 450). International experience shows that interesting innovations are possible with AI providing intelligent case management, being able to extract legal texts and using predictive analytics to assist judicial decision-making. (Create Progress, 2024, para. 3)

Artificial Intelligence presents a significant opportunity for administrative justice reform in Iraq, as long as the changes are well planned and suited to the national legal and institutional context. Investing in judicial technology without also reforming legislation and institutions will transform AI into a formal weapon that fails to fulfill the goals of current administrative justice.

#### 4. Legal and Constitutional Safeguards for AI Use in the Judiciary

Judicial systems in developed countries are witnessing a demand for the use of artificial intelligence technologies in judicial systems. The aim is to raise the

efficiency of performance and achieve the speed of resolution of cases. However, this technological progress raises constitutional and legal questions about its compatibility with the basic principles of human rights, and the need for a legislative framework that defines the scope of its work and establishes the necessary guarantees to protect the independence of the judiciary and the rights of litigants. In the Iraqi context, combining AI into the judiciary needs a thorough review of the existing legislative system and ensuring that it is consistent with established constitutional principles. (UNESCO, 2025, p. 3)

- a. ***The constitutional underpinnings underlying the use of technology in the judiciary:*** The use of technology in the Iraqi judiciary is an issue that depends on a delicate balance between technological modernization and constitutional dogma. Article 87 of Iraq's constitution provides for the independence of the judiciary, which means that any integration of technology including artificial intelligence must be done without compromising the impartiality of judges nor influence their decisions. Article 19 further emphasizes the importance of transparent, and fair use of digital case management systems by providing that the tools used to conduct judicial proceedings should provide the right of respect to the rights of the defendant, transparency and the ability to be reviewed. Moreover, the guarantee of the right to privacy of an individual can be found in the simpler principle according to which the least intrusive means necessary to reach its purposes can be used by the judicial system. Judicial data must therefore be governed by established legal framework as contained in Article 17 (Iraq Watch Group, 2025: 4).
- b. Studies indicate that the Iraqi judiciary is still plagued by excessive centralization and weakness in legislative structure governing the use of technology, which creates a legal vacuum that may be a threat to constitutional guarantees. Research reports have confirmed that this vacuum leads to a weakening of the capacity of the judicial system to keep up with the digital transformations affecting the world, and has a negative impact on the confidence of citizens towards the justice system. Therefore, any tendency towards the digitization of the judiciary must be developed on clear constitutional principles, together with the elaboration of national legislation that specifies the



scope of the use of technologies and the guarantees that must be established to ensure the independence of the judiciary and the rights of the litigants. (Ali et al., 2025, p. 478).

- c. **Constitutional guarantees for the use of AI in the judiciary:** The integration of AI technologies into the judicial system, especially in the administrative judiciary, is a strategic step towards institutional modernization and improved performance efficiency. However, this approach cannot be achieved in isolation from a strict constitutional and legislative framework that guarantees respect for fundamental human rights principles and the independence of the judiciary. In this context, there are a set of constitutional guarantees that must be taken into account when using artificial intelligence to issue or support judicial decisions. (OHCHR, 2023, p. 2). The first of these safeguards is the 'human-in-the-loop' principle, which requires that the judge remain the final decision-maker, and that the function of smart tools be limited to providing support and advice without replacing the judiciary. It should also guarantee the right to appeal and appeal decisions that algorithms have helped to formulate, ensuring that justice is not denied and promoting the principle of fair trial. The right to a clear interpretation of AI-powered decisions is a fundamental commitment to procedural justice, as a judicial decision cannot be held accountable without understanding the logic of making it. (Thomson Reuters Institute, 2025, para. 4)

Moreover, the principle of equality before the law requires that AI tools utilized by organizations must not have pre-existing assumptions built into how those tools have been constructed or how they will operate. Failure to adhere to this standard could result in discrimination against various people/groups. Therefore, developing a legal framework for the use of AI in the Iraqi judiciary requires close cooperation between legislators, the judiciary, and technology experts, while drawing on leading international experiences that have established regulatory models that balance innovation with the protection of constitutional rights. (Kampakis, 2025, p. 2).

#### 5. **Artificial Intelligence and the Effectiveness of Administrative Justice in Iraq**

Driven by the need to increase the quality of the judgments, speed up the adjudication of the cases and enhance procedural and material justice, the Iraqi administrative judiciary is gradually evolving in its institutional structure. Integration of artificial intelligence technologies in this setting is a strategic move towards modernization of the legal system as they provide sophisticated tools for case law analysis, extraction of legal ideas, and suggested possible solutions to the disputes on the basis of big databases. These tools contribute to the standardization of the standards of the judiciary, reduce the discrepancies in the judgments, and support the judges with accurate information without compromising the independence of the judicial decisions. (Susskind, 2019, p. 145) Some of the most visible applications of artificial intelligence in this field is the automating of the classification of the cases according to its kind and complexity, the electronic scheduling of the sessions, and the drafting of the preliminary judgment, thus reducing the time of separation and increasing the effectiveness of processes. Experiences abroad, such as in Estonia, have shown that the use of AI technologies in rather simple cases has led to a reduction of adjudication time by over 40% (Susskind, 2019, p. 145). In addition, AI can also promote transparency and accountability by enabling digital interfaces that enable litigants to track the progress of cases, analyze the performance of judges, and identify any potential biases in judgment. (Rahmani, 2024, p. 3).

However, to achieve these benefits requires a strict legislative framework to ensure the responsible use of these technologies, and balance innovation with respecting constitutional rights which has been confirmed from recent studies on digital transformation in Iraq. (Ahmed et al., 2020, pp. 450–452).

#### 6. **Requirements for Implementing AI in Iraq's Administrative Judiciary**

One great achievement in more attempts to update the state institutions and increase the effectiveness of dispute resolution processes is the integration of artificial intelligence in the judicial system. But this integration requires a set of legal and operational



requirements to ensure that this change is successful and to maintain the concepts of justice and human rights safeguards. In the case of the Iraqi context - which is characterized by structural problems within the administrative judiciary - there is an urgent need to analyze the current framework in order to provide the necessary legislative and institutional foundations for the safe and effective deployment of AI in the field of administrative justice.

I. **Legal requirements:** AI being incorporated in the Iraqi judicial system requires the establishment of a comprehensive and explicit legal framework regulating the use of such technologies within certain boundaries, in accordance with the principles of the constitution and the protection of individual rights. Provided that this framework defines the legal nature of applications of artificial intelligence, determining acceptable domains, such as case management, judicial data analysis or procedural assistance, and explicitly prohibiting the use of these technologies in the ultimate judicial decisions without direct human supervision, artificial accordance with the notion of 'human-in-the-loop', the establishment of specific legislation covering the regulation of AI in the judicial sphere is a step required. (Tiwari, 2024, p. 4). In addition, there is also a need to amend the provisions of the Civil Procedures Law No. 83 of 1969, and this is needed in order to move up with digital developments in that it should also provide for digital evidence, electronic litigation procedures, and mechanisms for appeal that artificial intelligence tools have contributed to the formulation of decisions. The provision of legal safeguards for protection of judicial data is one of the notable legislative requirements, because the legislation should contain explicit provisions that govern the collection and processing of personal and sensitive data that is used in the training of artificial intelligence systems, consistent with international standards for judicial data governance, such as those provided in the General Data Protection Regulation (GDPR) in the European Union. (Osama Tuma Legal, 2024, para. 5).

II. **Practical Requirements :** The application of artificial intelligence techniques in the Iraqi administrative judiciary is the development of an integrated digital environment based on an advanced technical infrastructure. Strengthening the digital

infrastructure of administrative courts is a prerequisite, as AI cannot function well without the digitalization of the case files and archives, and connecting AI systems to official databases maintained by the administrative authorities concerned human capacity building is also a central component in this transformation, as it involves the ongoing training of judges on the use of artificial intelligence tools and interpretation of their outputs, as well as the increase of the technical competence of administrative staff to ensure the proper operation and maintenance of smart systems in the long term. (University of Baghdad, College of Law 2025, para 4)

On the other hand, it is necessary to ensure institutional and technical integration between the judicial and administrative authorities to ensure the seamless flow of data so that AI systems can perform their analytical tasks and facilitate judicial decision-making. Before the implementation of AI at a national level, it is also recommended that pilot work be done in select courts to test the legal and practical viability and to find any problems and solve them in a limited context before implementing the deployment on a larger scale. (Mohammed & Alsammarraie, 2025, p. 6).

Artificial intelligence cannot be considered a magic formula for the administrative judiciary reform in Iraq, but a tool that requires a legal, institutional and supportive context. The availability of ruling legislation, good digital structure, and good human cadres, all are decisive elements that make Iraq achieve a qualitative change in administrative judicial system in the light of digital transformations in the world.

#### 7. **The UAE's Experience in Modernizing Administrative Courts Using Artificial Intelligence**

The UAE is among the region's leading countries in digital transformations and strategic steps towards integrating AI systems into the judicial institutions, especially administrative courts in particular. This experience can be considered an advanced model in the modernization of the judicial structure within the framework of the requirements of the digital age, and how modern technologies can contribute to improving the efficiency of administrative justice (Topchyi, 2024, pp. 1-2).



### 7.1. Institutional and Legislative Framework

The UAE has followed an advanced institutional and legislative path to use artificial intelligence in the development of the judicial structure, particularly at the level of administrative courts. These endeavors originated from the creation, in 2017, of the Ministry of Artificial Intelligence, first ministry of its kind worldwide, to supervise the policies of digital transformation in the institutions of the state, including the judicial sector. (Topchyi, 2024, p. 2). In 2025, the UAE founded a Regulatory Intelligence Office, which is the central body in drafting and reviewing legislation using artificial intelligence tools, to better the efficiency of the legislation and accelerate their updates. The UAE has also set up a unified digital legislative platform that incorporates federal and local laws, and court decisions, which contributes to the unification of procedures and enhances legislative coherence at the national level. (Khoury, Banerji, & Alich, 2025, p. 1).

This system of UAE legislation is characterised by the ability to adapt to the demands of society on a continuing basis, based on methods of predictive analysis and legislation based on big data. This organizational framework is unique, in the region, as the judicial and technological institutions are embedded in one system, with the idea of enhancing the efficacy of the administrative justice and the achievement of sustainable development. (European Business Magazine, 2025, p.1). When contrasted to the experience of Iraq, the UAE paradigm shows how long-term planning and legislative integration could potentially help accelerate judicial reform, especially in view of the challenges the traditional judicial systems face.

### 7.2. Practical Applications in Administrative Courts

Administrative courts in the UAE have experienced a qualitative transformation in the technological and procedural structure due to the extensive use of artificial intelligence technologies to enhance efficiency and speed in judicial adjudication. One of the most notable of these applications is the usage of predictive legal analysis which enables judges to predict the outcome of cases based on trends in prior rulings, hence contributing to the improvement of the quality of judicial judgments and the decrease of disparities in judgments. According to a report by the

UAE Ministry of Justice, AI-based applications reduced case processing time by 28%. (Real Estate in the Bridle Path, 2025, p. 2). Another important application is the creation of a virtual legal assistant, such as Luna, which the Dubai International Financial Centre (DIFC) Courts launched in 2022 to provide real-time advise on court processes and case filing requirements, improving access to justice and decreasing the need for costly traditional counselling (Real Estate in the Bridle Path, 2025, p. 4). The Ministry of Justice also revealed the development of Aisha, a virtual employee based on generative artificial intelligence that assists judges in reviewing millions of old cases and generating precise judicial briefs in seconds (Khan, 2024, p. 1).

These practical applications show how the UAE has been able to employ artificial intelligence not only as a technical tool, but as an essential element in reshaping administrative justice, ensuring efficiency, transparency and speed of adjudication of cases. When compared to Iraq's experience, it is clear that the UAE has adopted an integrated institutional model that can serve as a regional reference in modernizing the administrative judiciary.

### 7.3. Impact On the Efficiency of the Judicial System

The UAE's experience in using artificial intelligence in the administrative courts has demonstrated a tangible impact on the efficiency of the judiciary system; both in terms of the reduction in the time of adjudication of cases and by the quality of the legal service. The UAE Ministry of Justice report indicated that artificial intelligence applications contributed to reducing the processing time of cases in up to 28% and this is a qualitative shift in the performance of the judicial process. (Lexis Middle East, 2025, p. 1). Predictive data analysis technologies have also helped the judges to make more precise judgments by analyzing previous judgments and predicting the outcome of currently pending cases, thus enabling judicial uniformity and speeding up the resolution of conflicts.

One example of this change is in the experience of the Abu Dhabi Global Market (ADGM) Courts. It found a 65% reduction in case processing time, a reduction of 48% in administrative expenses and a 78% increase in user satisfaction after an AI-powered digital judicial



system was implemented (Albanna, Alshamsi, & Almourad, 2024, p. 4). Systems like Aisha have been able to assist judges also as they can quickly analyse millions of previous cases and provide precise judicial summaries, hence increasing the proceedings of judicial decisions (Khan, 2024, p. 1).

These results show that AI is not just a technical tool, but an indispensable element in the process of changing the efficiency of the administrative judicial system. When compared to the Iraqi model, it is evident that through institutional planning and technical integration, the UAE has been able to take a qualitative leap in performance in the field of justice, which is an important reference for countries seeking to reform the traditional judicial systems.

#### 7.4. Legal Challenges and Considerations

Even after the amazing strides the UAE has taken towards incorporating artificial intelligence in the country's judicial system, particularly in administrative courts, this digital revolution does come with a set of legal and moral issues that need to be thought through. One of the most prominent of these challenges is algorithmic bias, in which the unequal data used to train algorithms, in artificial intelligence, is used to enable algorithms to produce inequitable results. The CEUR study said that AI systems have limitations including data bias and lack of openness which could bias results and conceal decision channels, hence highlighting the need for robust monitoring systems to assure procedural fairness (Topchyi, 2024, p. 2).

The issue of transparency and accountability is also of growing concern, especially as decisions made by smart systems are difficult to interpret, this may result in a lack of public confidence in the judicial system. (Khoury, Banerji, & Alieh, 2025, p. 2). On the other hand, the protection of personal data is one of the most prominent legal considerations, since artificial intelligence systems are based on huge amount of sensitive data. The UAE has issued Federal Law No. 45 of 2021 on Data Protection which is an important step towards the regulation of the utilization of AI in judicial contexts (Lexis Middle East, 2025, p. 1).

#### 8. Analytical Comparison

Comparing these difficulties with the experience in Iraq, we can make a difference that the UAE has developed a more sophisticated and forward-looking legal system, which the effectiveness of this model is dependent on the continuous legislative development while improving the ethical monitoring and balancing the technical invention with the classical principles of justice.

Experience in the UAE illustrates how artificial intelligence, if put into a defined legal and ethical structure, might be a powerful tool for giving administrative courts an update. Even with all the difficulties, the UAE model has a lot of lessons for countries that are attempting to reform their legal systems and shows that technology is not a substitute for making justice more efficient, but rather a tool for this. The UAE's experience in the modernization of administrative courts reflects an integrated institutional and legislative model, which focuses on the use of artificial intelligence technologies to enhance the efficiency of the judiciary, raise judicial transparency, and reduce the time of adjudication of cases. The establishment of the Ministry of Artificial Intelligence in 2017 and the Legislative Intelligence Office in 2025 has contributed to the establishment of a flexible legislative structure based on the big data analysis and predictive legislation to enable the UAE to launch unified digital platforms to integrate federal laws and court decisions (Khoury, Banerji, & Alieh, 2025, p. 1).

On the other hand, the administrative judicial system in Iraq has certain legislative and structural challenges that hinder the incorporation of current technology into the judicial system, most notably: Law No. 78 of 2012, which prohibits the use of electronic means in court procedures, as well as the absence of a central database and a unified digital system. Particularly so in a traditional legal framework plagued by overcrowding and slow-moving litigation (Ali et al., 2025, pp. 478-483), these constraints have reduced Iraq's ability to appropriately embrace artificial intelligence solutions.

In terms of technical applications, the UAE has succeeded in using advanced tools such as Aisha and Luna, which offer smart judicial support and help judges review millions of cases effectively and



quickly, and it helps to reduce separation time of more than 28% (Topchyi, 2024, p. 2). While Iraq has not been able to generalize any successful digital experience at a national level, efforts have remained limited to limited non-institutional projects, such as the cybercourt in Sulaymaniyah (Ahmed et al., 2021, pp. 110-112).

Regarding legal challenges, the UAE has battled problems related to algorithmic bias, data protection, and judicial autonomy. Through tailored laws like Federal Law No. 45 of 2021 and ethical standards guiding the responsible application of artificial intelligence (Lexus Middle East, 2025, p. 1), it has, though, overcome these. Iraq, however, has not yet created a legal system governing the use of artificial intelligence within its judicial system, therefore exacerbating the difference between it and developed nations in this area.

Based on this, it can be said that the UAE's success in modernizing the administrative judiciary using artificial intelligence stems from clear political will, institutional and legislative integration, while Iraq needs to review its legislation, lift legal restrictions, and develop the digital infrastructure, to ensure a judicial transformation based on the principles of modern justice and responsible technology.

## 9. Conclusion

The study showed that the administrative judicial model in the UAE represents a pioneering experience in the field of digital transformation through the systematic and thoughtful employment of artificial intelligence, as the establishment of specialized institutions such as the Ministry of Artificial Intelligence and the Legislative Intelligence Office contributed to providing a flexible legislative structure that allowed the introduction of case analysis and smart litigation techniques within a unified digital environment. This directly contributed to improving the indicators of judicial efficiency, in particular, reducing the time to adjudicate cases by up to 28%, and increasing customer satisfaction with digital judicial services, which led to a greater level of public confidence in administrative courts. Conversely, the administrative system of Iraqi judiciary faces legislative and technical challenges that hinder the implementation of such instruments, most notably the prohibition prescribed by Federal Law No. 78 of 2012,

as well as the lack of a centralised digital database version and the persistence of the use of traditional methods based on paper. The study also demonstrated that Iraq does not have a legal and ethical context that governs the use of artificial intelligence technologies in the judiciary, which prevents the expansion of any digital experiences of an institutional nature. Accordingly, the comparison would emphasize the need of Iraq for comprehensive review of judicial legislation, development of the digital infrastructure and the training of judges on artificial intelligence tools in order to guarantee an effective digital transformation to contribute to the increase of the efficiency of administrative courts and achievement of procedural justice in light of the changes of the digital age.

## 10. Recommendations

1. **Updating the Iraqi legislative system in line with the requirements of digital transformation.** The study recommends the need to amend laws that hinder electronic judicial procedures, foremost of which is Federal Law No. (78) of 2012, by drafting new legislation that recognizes the legitimacy of digital litigation, and sets legal and ethical controls for the use of artificial intelligence in administrative courts, ensuring the protection of procedural rights and the independence of the judiciary.
2. Creating a national agency with expertise in controlling legal digital change. The UAE experience emphasizes the need of a main institutional body supervising digital judicial modernization plan execution. Accordingly, the study recommends the establishment of an independent body linked to the Supreme Judicial Council, which is concerned with developing technical policies, evaluating the digital judicial structure, and monitoring the safety of the application of artificial intelligence tools within the courts.
3. **Building the digital infrastructure of Iraqi administrative courts.** The study recommends the creation of a smart national judicial platform that combines procedural data, judgments, and judicial precedents, and is able to integrate with analytical artificial intelligence tools. Courts should also be equipped with modern technical tools that enable case management and decisions to be issued electronically.



4. **Integrating AI into judicial processes in a gradual and thoughtful manner** AI applications (such as virtual legal assistant, case law analysis) should be adopted gradually, commensurate with the nature of the Iraqi system and the sensitivity of administrative judicial files, with the need to subject these tools to legal control and clear ethical standards.
  5. **Training and qualifying judicial cadres on modern technologies** . The study recommends launching specialized training programs targeting judges and judicial employees in the field of electronic litigation, operating artificial intelligence systems, in addition to integrating educational curricula in law schools on digital justice, artificial intelligence ethics, and the risks of algorithmic bias.
  6. **Establishing a legal framework for the protection of personal data in the judicial context given the reliance of artificial intelligence on sensitive data**, the study recommends the issuance of a national law for the protection of personal data within the judicial environment, which is consistent with international best practices, and defines controls for data collection, storage, and processing by technical judicial authorities.
  7. **Adaptive benefit from the Emirati experience without verbatim transcription** . The study recommends adopting the Emirati experience as an applied reference source, so that its components are analyzed, its institutional and technical mechanisms are accommodated, and then readapted within the Iraqi legal context to take into account the constitutional, political and functional differences between the two countries.
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