# Artificial Intelligence Applications in Administrative Law "An analytical study"

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**Abstract**

*This study aims at determining the role of artificial intelligence systems in the development and improving of the administrative legal base, and to identify the theoretical framework in the field of using the artificial intelligence in the administrative life and its impacts. Moreover, the study provides recommendations to the competent authorities in the field of artificial intelligence for its uses in administrative work in a manner that guarantees the various dimensions of the administrative development, Especially the technological dimension. Among the outcomes reached through this study is that the artificial intelligence is a modern technology that has been able to enter all fields, especially utility and service ones, and it is indispensable to exploit such intelligence in describing service quality when needs are satisfied. Finally, one of the most important recommendations of the study is to find a legal regulation for the artificial intelligence, in addition to strengthening the technological infrastructure to accommodate the intervention of this technology in the field of the administrative law; as flexibility and scalability are of its most important characteristics.*

**Keywords:** *Administrative Law, Artificial Intelligence, Administrative Development, Predictive Justice, Algorithms, Administrative Artificial Intelligence Governance.*

## INTRODUCTION

The idea of "artificial intelligence," as an idea of "artificially modernized" and "intelligent" objects, machines, or tools — is common throughout human history, and its various forms can be found in both Western and non-Western religions, myths, literature, and philosophical traditions. These examples in themselves testify to the enduring curiosity that humanity has had towards these entities, and although this curiosity is expressed through culturally diverse manifestations, it is something common or cross-cultural. Nowadays, the fascination with artificial intelligence, including its ethical dimensions, is intensifying - due to its development and applications in the real world.

Artificial intelligence is defined as: "It is that branch of computer science through which computer programs can be created and designed that simulate the style of human intelligence so that the computer can perform some tasks instead of humans, which require thinking, understanding, hearing, speaking and movement in a logical and organized manner." Considering the artificial intelligence started due to the shift from traditional programming systems after World War II to the development of computer programs that simulate human intelligence in making games and developing solutions to some puzzles, which in turn led to larger simulation systems, which then crystallized and became artificial intelligence systems.

The transformations arranged by artificial intelligence, and the trend towards its consumption as both a commodity and a service, are considered profound and affect all areas of human life, and the various paths of its needs requirements, and include them between necessary, secondary and essential. In this sense, administrative law must have its word toward artificial intelligence as "phenomenon and issue". This undisputed issue will represent one of the most important challenges that must be faced in the near future.

Artificial intelligence is a major and effective mean by virtue of which services are delivered, however, it is still abnormal transformations in the eyes of the administrative law. So, how will it be dealt with administratively, and to what extent can the templates of administrative law accommodate this madness of knowledge, which is truly premature for the strategies and plans of most administrative jurisprudence?

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**Manifestations of Artificial Intelligence Intervention in the Administrative Legal Rule**.

legal text, whether by adapting it through its explanatory texts to its developments, or creating texts that are compatible with its nature and its contents and components. Since artificial intelligence is one of these highly developed cognitive outputs, the legal arena has not been isolated from the manifestations of its application. Thus, - here - we define the manifestations of the application of the administrative law of artificial intelligence.

## Strategies for Planning, Administrative Support, and Artificial Intelligence

Planning and support systems for decision-making, simulation, and artificial intelligence systems that assist in planning and decision-making are already present today in the legal field, and can also be used in the administrative field. Artificial intelligence can be used in the field of activating the administrative services, by enabling the machine from gathering the information and learning and understanding through the actual practice and practical applications, in addition to the experience gained, so that the machine is quick to respond in various situations and takes the right decisions; as it studies the set of incoming possibilities, knowing the outcome of each possibility, knowing the desired results from each possibility, choosing the best possible decisions that reach the desired results, acquiring knowledge and using it to solve problems and issues facing the machine later through the experiences that are stored within it.

In the context of guaranteeing that law enforcement agencies are keeping pace with the development and technological progress and to reduce the service stagnation, by using the latest available systems, some advanced administrations, in the jurisprudence of administrative law, have been working on introducing artificial intelligence into their strategic plans aimed at adopting technological progress in administrative work.

Consequently, it is possible to benefit from artificial intelligence in this field, in a way that achieves prosperity in administrative work, and achieves the goals of administrative reengineering in the field of administrative law applications and the prompt pace of modernization of management and its contemporaneity with the requirements of the knowledge-age, which does not stop at a point except for single moments, and goes towards the innovation, and then the balance between innovation and the increasing levels of need, and the need for effective selection of means to meet and satisfy them.

In the field of administrative law enforcement and development, the artificial intelligence techniques provide a variety of applications, including in the field of administrative intelligence:

Systems capable of reviewing massive amounts of video data and setting targets

Logistics applications that enable optimization and resource savings

Autonomous leadership, which also has potential in the field of administrative security, as in systems of planning and support for decision-making and governance, which makes it possible to improve and shorten the planning and decision-making processes in the stages before performing tasks, based on huge amounts of data that could not be analyzed previously; Such as anticipating risks in management contracts and determining the guarantee of contractual bail.

Command and control systems that make it possible to deal with big data from different sources, with cross-reference and real-time analysis to carry out tasks, and improve results through guidance and changes in decisions in a continuous cycle.

Forecasting, warning, prevention, and disaster management software, including the ability to use large databases or in various sensors in order to conduct information aggregation, which will lead to insights that cannot be accessed by other means.

## Administrative Issues and Artificial Intelligence Applications

The main interest of artificial intelligence, in administrative matters, is to facilitate the decision-making process, on the one hand, and to crystallize the provision of utility and utility services, in a manner that is compatible with the roles of achieving public benefit on the other hand, and therefore its application to the contents of administrative life, through its various frameworks and issues, depends on the relationship of influence or

solutions, when the necessity of interest calls for that, and we discover the most important of these applications in the following points:

## For The Idea of Providing the Service:

Algorithms enter the field of administrative law with the aim of increasing the efficiency of public administrative services and policies that are exclusively implemented by public legal personalities, subject to the provisions of administrative law, and considered among its most important components and service pillars in the chain-shape or administrative hierarchy alike.

Returning to the determinants of public law in general, and administrative law in particular as one of the foundations of public law, we find that the characteristic of development and appropriateness is one of the most important characteristics that help administrative law to form the legal and terminological environment for the adoption of artificial intelligence as an aspect of administrative strategic renewal, based on the balance between technological dimensions and patterns of developmental human regeneration, defining criteria for the transition from the concept of effectiveness to quality in service provision.

Data processing by artificial intelligence, within the use of powerful algorithms, contributes to building an efficient and effective overall administrative system.

Improving the efficiency of administrative development paths and enhancing long-term research on strategies to achieve a utilitarian balance between the public interest and the private interest, within the frameworks of the rules and texts of administrative law, through residential investment in the outputs of artificial intelligence, would achieve public administrative security.

The power of the administration in the conduct of its affairs is strongly linked to its legislative framework, which controls its various administrative operations, whether it behaves as a person of public law or when applying the rules of private law to it, on the occasion of its practice of activities in which it is equal with individuals, under the rules of administrative development strategies, whose contemporary inputs today includes putting the artificial intelligence over the traditional mechanisms of administrative work in general, as this process appears when talking about administrative law tools in the field of public management and administrative matters, whether they are executive and material (i.e. contracts and public funds) or organizational and legal ones (the decisions and the employee) or appear in the positive form (general utility) or negative like, (the administrative control)

## In The Field of Administrative Justice

It is likely that the use of artificial intelligence in the justice sector, specifically the administrative judiciary, will change the way judges make their decisions.

This is done by introducing artificial intelligence outputs represented by the so-called predictive algorithms, based on the incremental, massive and free creation of case laws (precedents).

In the context of open data, making it possible to provide judicial decision support.

Also in the field of the judicial process from its beginning to its end, the administrative judiciary's use of artificial intelligence allows the conflicting parties to determine the chances of success of judicial procedures more accurately, in a manner consistent with the specificity of the dispute and administrative judicial procedures alike. Examples of artificial intelligence inputs in the administrative judicial process are summarized in the following images:

The judicial investigation and disclosure of the circumstances

The electronic courts and the robot judge

Bringing the administrative judiciary closer to the citizens

Intelligent judicial alternatives to resolve administrative disputes.

Predictive justice allows administrative judges to refocus administrative cases by leveraging an algorithmic data bank resulting in individuals gaining greater confidence in the justice system, the ability to remove judgments from randomness and freeing judges from repetitive or less complex tasks, all in the interest of faster, safe and effective justice.

## In The Field of Administration Privileges

The effects of artificial intelligence on the transformation of the discretionary power of public administration, in its legal and administrative field, arranges many effects and impacts, especially if it is viewed from its conceptual aspect (the rationalization of public authority privileges), and from its practical aspect (the governance).

## The Future of Discretion

Understanding the transformations in the discretion of public officials derived from the privileges of public administration and fixed to them by contractual relationship, begins with the premise that artificial intelligence lies at the heart of discretion, which is a central element in the work of public administration and in the provision of high-quality services.

Generally, In modern administrative jurisprudence, two opposing theories appeared about the impact of information and communication technology on the discretionary power of public administration, which we summarize as follows:

The first theory: Its pioneers see discretion diminish or even disappear with automated decision-making.

The second theory: It rejects the idea of a lack of discretion, while retaining the idea of its decline, on the grounds that artificial intelligence technology is only one factor among the other emerging factors that allow an understanding of discretio.

We believe that, despite the public administration having made significant strides in the field of uses of the third generation of technology, the fourth generation industry is still far from the reach of the administrative authority, whether in terms of human or material capabilities alike.

Hence, the application of artificial intelligence in the field of administrative law in general and administrative discretion as one of its issues, does not necessarily mean giving up or getting rid of it, because the main objective of imposing the resulting privileges is to preserve the power and position of the administration when confronting individuals on the occasion of meeting needs and providing service. On the other hand, if we accept the demise and decay of the discretionary authority when applying artificial intelligence, we will necessarily face a deficit in the rules of managing the public administration, and the creation of administrative insecurity, because the mass of service seekers will not hesitate to sabotage the public administration, as a result of unconscious knowledge and lack of confidence in the artificial intelligence, too.

We base our opinion on the following arguments:

Technological indeterminism.

The limitations of a narrow definition of discretionary authority.

Narrow artificial intelligence framework (there are still initiatives, based on experimentation, not activation)

The absence of technological specialization, as most of the human cadre based on embodying the discretionary authority of the administration, and enjoying its privileges derived from the administration in itself, is still limited in human development, and needs training and cognitive and applied activation, to deal with this advanced scientific discovery.

## Administrative Governance in A State of Transformation

Public administrations are gradually becoming digital departments where more work is done through computers, rather than dealing with users face to face. In an increasing number of tasks, and one of the manifestations of this is the wide use of technical terms in this field, such as electronic management, electronic

signature, electronic transactions, electronic administrative means, electronic facility and utility, algorithmic decision,.etc.

Rapid developments in artificial intelligence and the intensification of adoption of artificial intelligence in the areas of administrative law pose new challenges to management, as it has to manage the scale and speed of the social and technical transformations that are occurring

Governance of artificial intelligence is a vastly different area. New applications of this intelligence provide opportunities to increase administrative efficiency and quality of service life, but they also generate unintended consequences and pose new forms of risks that must be addressed. To enhance the benefits of the artificial intelligence while minimizing downside risks, departments at all levels need to better understand the scope and depth of risks posed and develop processes, organizational structures, and managerial governance to address these both legal and administrative challenges.

## The Impact of Artificial Intelligence on Administrative Law

available to administrative law, so that it is the typical legal environment for the application of artificial intelligence, as one of the most important pillars of technological development, and the manifestations of the fourth generation of industries, in light of the crystallization of the idea of modernizing the administrative sector, as one of the most important components of the administrative law, this ia all because of investment in the third generation of industry (cyber technology).

## The Personalization of Administrative Law on Artificial Intelligence

Predictive research claims based on looking ahead, confirm that developments in artificial intelligence will reach a level where machines will have the ability to go beyond initial programming and know how to learn, that is, to show judgment when the situation changes.

This finding raises multiple concerns about accountability and oversight principles. Therefore, it is important to proceed cautiously with the deployment of artificial intelligence to replace human decision.

Basically, the challenge, in this regard, is first to program systems with values and motivations well aligned with those of their designers and direct them toward well-defined goals, improving their responsiveness and the rationality of their decisions. The next step is to equip these machines with a discretionary capability that allows them to detect subtle changes in the environment, analyze and evaluate situations, and then make quick decisions, without human oversight.

Artificial intelligence with its new technologies is changing the ways in which law is made and promulgated.

This is either in the field of general standards or in the field of private standards. As these new technologies arrange a major transformation in the administrative legal system.

The limits of artificial intelligence when talking about its personalization, within the frameworks of the rules of the administrative legal text, lies in the fact that legal thinking remains limited to humans; as it seems that building a syllogism around the topic is a mental paradox; At this point, due to the difference in compatibility between human thinking and the machine applied to artificial intelligence systems, and it should not be artificial intelligence that will be confiscated by administrative law, by finding legal exits and loopholes that allow it to be framed within the frameworks of administrative law, in the form of recognition and the components of the public facility and its requirements, besides the requirement of subordination to ideas of public interest.

Thus, for the management of future, we must find artificial intelligence as a tool at the service of management, which will certainly help to become more efficient in responding to the most complex demands. Whereas, the service managerial intelligence will then focus on the tasks with the highest added value.

## Give Realism to the Applications of Artificial Intelligence in Administrative Law

Administrative bodies and administrative law persons carry out a set of activities, in order to fulfill the service, and to ensure that the public utility continues to carry out its tasks, within the rules and principles of its

management, and with the advantage of each of them, that they are traditionally implemented by officials, but it is not difficult or unrealistic to imagine their interaction and implementation, Increasingly with digital systems rather than human.

As the actual applied practice today does not negate that the traditional administrative tasks, for which humans have been responsible for a long time, are increasing frequently by means of computer systems, of which artificial intelligence is originally nothing but an extension of it.

Internal processes, the development of smart contracts, and increasingly smart algorithms, are all issues that the legal administration shall face and anticipate as much as possible, in order to give patterns of activation and actual physical application, away from slogans, and opinions and predictive or developmental outputs based on the virtual text, without undertaking the application.

Thus, artificial intelligence in the administrative field is "interpretable" if it can be easily explained from the data and the characteristics of the known and completed administrative process. So, explaining how artificial intelligence reaches an administrative result, is a prerequisite for activating the realistic outputs of artificial intelligence.

## CONCLUSION

The gradual replacement of human intelligence with artificial intelligence does not seem to know any other limit than that set by technology at present. However, upon examination, it appears that these two forms of intelligence cannot be considered equivalent under law, nor can they be applied wholly in administrative law.

Artificial intelligence is able to imitate many aspects of human intelligence, such as language or arithmetic. In some ways, artificial intelligence surpasses human understanding. On the other hand, other aspects of human intelligence, such as consciousness, willpower, and even emotions, are all alien to the artificial intelligence. In general, computer systems cannot access the intrinsic dimensions of human intelligence, even the most complex one.

Finally, the absence of the legal identity of artificial intelligence, whether in the rules of public or private law, mandatorily presupposes the restriction of the field of artificial intelligence by perpetuating the public order of humanity, and adapting the rules that have been thought to take into account human subjectivity to the objectivity of intelligent industrial systems.

The potential applications of the artificial intelligence to improve the quality and efficiency of administrative work are multiplying and affecting areas as diverse as health and social services, taxation, transportation and communications. However, governments are slow to adopt new technologies and invest little in their renewal and modernization.

In the end, the legal understanding of artificial intelligence is an opportunity for more general reflection on administrative intelligence, the central and decentralized position of administrative units, and the extent of attraction and harmony with the developments of artificial intelligence in the administrative legal system today.

It is therefore important to continue research to understand the effects of such intelligence on managerial discretion, performance, and public governance. The results of this work will help identify possible solutions to prevent risks and establish ethical guidelines that reconcile public administration values with the contributions of the artificial intelligence.

## REFERENCES

United Nations Educational, Scientific and Cultural Organization "Executive Council", Preliminary study of the technical and legal aspects related to the desirability of developing a normative document on the ethics of artificial intelligence, 206th session, Paris, 2019. (In Arabic)

Racine J.-B., « La résolution amiable des différends en ligne ou la figure de l'algorithme médiateur », D. 2018

Rassler. Don. "RemotelyPilotedInnovation:Terrorism, Drones and SupportiveTechnology", (CombatingTerrorism Center at West Point, United States MilitaryAcademy, 2016

Kathleen McKendrick, "Artificial Intelligence PredictionandCounterterrorism", Chattam House, Britain, August 2019

Ministère de l'Economie et de l'Innovation, Programme Innovation Soutien aux projets d'innovation en intelligence artificielle, Gouvernement du Québec, janvier 2020

Pecaut-Rivolier L. et Robin S., « Justice et intelligence artificielle, préparer demain – épisode I », Dalloz actualité, 14 avr. 2020.