Political Horizons
Vol. 4, No. 1, June 2026

The Ethical Integration of Artificial Intelligence in Smart Cities: An Islamic Perspective

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Article Information

Received: May 23, 2025
Revised: Dec 06, 2025
Accepted: June 30, 2026

Keywords
AI, Smart Cities,
Justice (adl),
Common good (Maslahah),
Compassion (rahmah)

Abstract

The rapid evolution of AI technologies has changed the meaning of the very notion of smart cities, thus, permitting unparalleled levels of transport efficiency, health care, education, and energy consumption. The other multifaceted ethical issues relating to the introduction of AI include the privacy, data safety, algorithm bias, surveillance, and creation of an augmented divide between social disparities. The study article is concerned with the ethical consideration of AI in smart cities in the context of Islamic ethical considerations i.e. justice (*Adl*), compassion (*Rahmah*), and common good (*Maslahah*). By relying on the systematic literature review technique, the study will identify the evidence in the current academic literature, case studies, and policy reviews to identify how Islamic values can influence governance, planning, and the introduction of AI-based urban infrastructure. The literature review supports the reality that despite the fact that the programs of a smart city would suggest the advantages or development in the management of traffic, reduction in the intensity of emissions, personalized health and adaptive education, it would be harmful when it comes to justice, inclusiveness and human dignity. This research follows qualitative method to get in-depth information of the core objective of the study. The Islamic moral principles as laid down in the Quran and Sunnah give a holistic method of addressing these issues by prioritizing the fairness, confidentiality and the promotion of the good of the populace. These findings are summarized such regulations are being practiced, including the application of fairness measures in AI systems, privacy-by-design, participatory governance, and inclusive city planning of services. It is determined that the comparative analysis of AI application in different areas-transportation, healthcare and education support the Islamic ethics and international best practice on ethical AI.

1. Introduction

A smart city is an invention in the technologies of urban planning and city management methods in which networked digital technologies are being applied to control the infrastructures and deliver services in the city. Some of the technologies used include city operating systems, centralized control rooms, intelligent transport systems, smart energy grids, sensor networks, and smartphone applications (Herath and Mittal, 2022). Although innovativeness and efficiency are possible, introducing such technologies raises serious ethical issues regarding the invasion of privacy due to the

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monitoring of individuals all the time, the loss of control due to the transparency of the systems, discrimination based on predictive profiling, and unequal access to services due to the digital divides (Phillips, 2022). The issue of ethics is more significant when AI receives a higher priority in the physical context of cities. By 2025, cities in every corner of the world were rapidly adapting AI systems in their systems in an effort to simplify all spheres of life, including traffic flow and energy consumption. However, other ethicists who examine the use of AI in urban communities state that most of the identified ethical issues raised about the current versions of urban AI are quite close to the overall dislike of the technology (Phillips, 2022). These are information security issues, privacy issues and issues of compounding the preexisting social imbalances.

The issues in the Islamic moral thinking are brought up with acuity. The Islamic values, due to the emphasis on justice, common good and judicious management, therefore, offer a more holistic path to thinking through and shaping AI application in urban areas. Primarily, AI applications need to be juxtaposed to the specified ethical values because urban communities will turn into smart communities so that the development of technologies will not harm humanity and the fundamental principles. That is, the necessity to involve technical experts, policy theorists, and Islamic scholars in an interdisciplinary process is not far off, in order to solve the problem of ensuring that the AI systems used in the smart cities become more innovative and ethical. Part of the key recommendations is that the governing paradigms need to operate under the Islamic ethics, stakeholder consultation, technical solutions which would deliver fairness and privacy, metrics development which would keep the ethics under check. The present paper concludes that integrating Islamic ethics into the design of a smart city will not only solve the technological dilemmas at the moment but also create a substantial basis on sustainable, equitable, and human urban living. Having these values as the main part of AI management and design, smart cities will have a chance to meet the needs of all its residents without abusing the basic human rights and social justice (Salman, 2025).

2. Literature Review

2.1 Artificial Intelligence and Smart Cities

The idea to build smart cities is conceptualized based on the application of information and communication technologies in developing city service, therefore, contributing to the betterments of citizens. The force behind this revolution is artificial intelligence since it allowed cities to access significant amounts of data and make smart decisions in real-time. According to Herath and Mittal, 2022, a critical review of 133 articles concerning the uptake of AI in smart cities, 2014-2021, revealed that the areas of use were transportation, healthcare, energy management, and public safety. The application of AI in the transportation industry has several advantages. Indicatively, Pittsburgh used the Surtrac system at 50 intersections and cut down the travel time by 25 percent and traffic jam by 40 percent by maintaining the traffic flow in real time, Smart City Hub, 2022. 2024.

The eagerness of Amsterdam to turn into a zero-emission transport city by 2030 is an excellent illustration of the potential of the idea of artificial intelligence to support the process of the realization of the concept of environmental sustainability at the city level (World Economic Forum, 2024). Nevertheless, although these efforts show the efficiency of AI in its technical and policy-oriented approach to the reduction of emissions, much of their functioning is in a technocratic system, where efficiency and environmental performance are the most valued. The gap in analysis is that there is no clear ethical ground that deals with social justice, fair access, and moral responsibility. Islamic ethical standards, including *Adl* (justice) and the *Maslahah* (public good) are additive to these models because they provide the sustainability change that AI-driven sustainability brings with it is not only environmentally efficient but also socially fair and encompassing. (Ministry of Education of China, 2025).

Ethical Frameworks in AI the ethical framework progresses have also been on the increase of which the institutions, along with governments, have been noticing the emergence of the need to apply moral

principles in the regulation of technological progressions. The technology interests in smart cities in the study of Phillips, 2022, are concerned mainly with the problem of privacy, security, and fairness, yet some technology-oriented reviews or frameworks that can support the ethical discussion were also included in the research. In addition, the recent studies have marked the issues of algorithmic prejudices in smart cities. Biased data would result in unjust outcomes and perpetuate social inequalities and the application of the potential of inclusive environments that would be challenging (Herath and Mittal, 2022). This will in turn require the use of strong mechanisms regarding the identification and solutions of biases such as using a diversity of and representative data, and methods of algorithmic fairness.

2.2 Islamic Ethics and Technology

The Islamic ethics (being based on the Quran and Sunnah) offer a rational approach towards the problems of modernity, including the technological revolution. Other sources discussing the application of Islamic ethics to AI and smart cities building, including, but not limited to, Kamali (2008) and Mohadi and Tarshany (2023), have covered it.

The Arabic word *Adl* refers to justice and has been applied over twenty-seven times in Quran and its pre-eminence as one of the essences of Islam is proven (Kamali, 2008). Justice is a natural end of the Islamic law or Sharia; technically, it means putting things in the right place and right position and it is used to establish equilibrium of the forces of compulsion and right in every aspect of life (Kamali, 2008). It is compassion and mercy otherwise called *Rahmah*, and it is the primary reason why Muhammad was sent to be a Prophet, as the Quran recommends. This can be seen in the Quran and Sunnah provisions that eradicate favouritism, curb misery and set up justice (Kamali, 2008). This technology maxim ratifies the wellness value and the respectful design value, which is placed in the centre. *Maslahah* is a term that is used to describe activities and policies that are used to maximize the good of the people and it does not cause harm to the people. The recent study by Mohadi and Tarshany (2023) This literature confirms the relevance of the given concept by pointing out that the ethical aspects should be incorporated into the process of creating and implementing artificial intelligence solutions. Nevertheless, even with this increasing awareness, much of the literature remains quite normative and incomplete and provides scanty information on how ethical considerations can be systematized into AI-based systems of urban governance, especially in non-Western and Islamic societies. Intelligence.

3. Methodology

In this paper, the analysis of the academic sources about the ethics of AI in smart cities through the Islamic ethical prism is made with the help of systematic literature review. Systematic review follows the guidelines provided by Phillips (2022), and, therefore, it includes the process of gathering and summarizing the number of articles dedicated to the concept of smart city ethics. The set of facts belonged to the discovery of the relevant research in various databases of articles released between 2015 and 2025 to ensure an up-to-date solution. The keywords used in the search included the variants of artificial intelligence, smart cities, ethics, Islamic ethics, and the Maqasid Shariah. They were chosen based on relationship to research questions and quality of their academic status. In the literature review, the study was qualitative and aimed to find important themes and trends in the literature. Specific emphasis was put on the methods of how AI can be applied to smart cities to be able to utilize the moral principles of Islam, and the dissimilarities between Islamic and other moral systems. The review was also aimed at exploring the examples of smart city implementations with the purpose of defining the best practices and issues of ethical AI implementations.

4. Results

This study has demonstrated that the linkage between the principle of ethics and the development of smart cities is getting more significant and a number of researchers have examined how the Islamic

codes of ethics can be applied to the development process. This paper states that the most practically translatable values in the creation of smart cities are *Adl* (justice), *Rahmah* (compassion), and *Maslahah* (communal well-being) among the variety of Islamic moral principles presented in the literature. This choice is informed by their immediate correspondence to AI-driven governance, service delivery, and sustainability results, in which concerns of fairness, inclusivity, and benefits to the population are most acute. (Kamali, 2008; Mohadi and Tarshany, 2023).

4.1 Smart Cities Ethical Principle (Islamic)

Islamic ethics should be used to motivate the production, deployment, and operation of AI in intelligent cities using an integrated moral ideal. The Adl principle is considered to form the basis of value in the Islamic jurisprudence and consequently places a burden on the people in power and those involved in creating the AI system to make sure that the system is fair, there is no discrimination in the system and that it does not violate human dignity (Kamali, 2008). In practical solution-finding of smart-city infrastructures, the translation of Adl needs to have algorithmic fairness measures, strict information-auditing measures and incessant efforts aimed at ensuring that the training data is diverse in order to alleviate prejudices in the socio-technical system. The fourth and the most important, but also the least, is the need of justice that requires independent ethical considerations and the impact analysis of AI-based decision-making systems, such as those adopted in urban policing, welfare targeting, and resource allocation (Herath and Mittal, 2022). This reacts to structural discrimination and ensures that the population has confidence about how the technologically mediated forms of governance are occurring. Smart cities are further developed in moral perspective by Rahmah (meaning compassion) to human welfare, empathy, and inclusion. Rahmah suggests that the ICT-based urban settings should be planned keeping in mind various physical, social, and psychological requirements of the communities inhabiting the environments through integrating the application of AI in planning the territories, provision of digital services, and automated services. This can be well illustrated in the AIs-enhanced healthcare surveillance systems that take this notion into account through the provision of proactive, easy, and low-latency medical assistance. Such systems provide health alerts tailored to the needs of the vulnerable population, including the elderly, people with disabilities, and the chronically ill, predictive diagnostics, and remote care solutions. In that way, compassion ceases to exist as an ethical ideal, but it is the working design criterion, which will inform the development of human and decent smart-city ecosystems. Similarly, the Islamic ethic of *Maslahah* upholds the view that long-term development, social peace and the common good is always better than selfish economic or purely technical benefit. *Maslahah* involves the intelligent systems in the AI governance mechanism to ensure that the long-term welfare of the society is supported through reduction in inequity and augmentation in the resilience of the community (Mohadi and Tarshany, 2023). The other situation that is most noticeable is the use of AI in education, where the content offered by educational platforms is modified based on the requirements of a particular learner, the origin of structural learning inequalities is eliminated, and a greater number of individuals receive quality education. This is mined in the Ministry of Education of China, 2025. In this way, *Maslahah* would render the technological innovation in agreement with communal good and smart-city shifts are morally knowledgeable and socially significant. Together, *Adl, Rahmah* and *Maslahah* present an influential normative framework of Islamic ethics, which guides AI application toward responsible innovation as smart cities. Three major pillars of innovation responsibility are put forward and are the following: the need of justice, compassion and public interest in the balance between technological progress and ethical integrity and humanism. Table 1 below illustrates the comparison of different applications of AI in smart cities and the way they compare against the Islamic ethical principles.

Table 1: Alignment of Smart City AI Applications with Islamic Ethical Principles

AI Domain	Smart City Use Cases	Key Islamic Principle	Implementation Example	Ethical Consideration
Transportation	Traffic management, emissions reduction	*Maslahah* (common good)	Pittsburgh's Surtrac system (Kamali)	Equitable access to mobility benefits
Healthcare	Patient monitoring, service delivery	*Rahmah* (compassion)	Edge AI-enabled IoT healthcare (Herath & Mittal, 2022)	Data privacy and protection of sensitive health info
Education	Personalized learning platforms	'*Adl* (justice)	AI reducing achievement gaps (Ministry of Education of China, 2025)	Addressing digital divides and ensuring accessibility
Energy	Smart grids, consumption optimization	Stewardship	Amsterdam's emissions-free initiative (World Economic Forum, 2024)	Environmental sustainability and resource conservation
Public Safety	Surveillance, emergency response	Privacy (*'iffah*)	Balancing security with privacy (Phillips, 2022)	Preventing undue surveillance and protecting liberties

4.2 The Ethical Attraction of the AI Implementation

Despite these advantages, several problems have been noted when it comes to the ethical aspects of AI application in smart cities. Among the key problems is data bias as biased data can lead to discriminative outcomes, especially when it comes to vulnerable populations. This goes against Islamic concept of Adl, which states that equal dispensation of justice or treatment to all should be practiced (Kamali 2008). Another significant question of protection is privacy. Data requirement is voracious of the technologies that are commonly being used in smart cities. This raises the issues of intrusive surveillance. This goes against the Islamic concept of *Iffah* or decency and privacy in which the privacy in personal affairs is sacred. As it has been demonstrated, smart cities technology implements privacy-by-design principles, some data governance, and data collection and use transparency. It would be more difficult to practice human control and moral leadership in the cases when the AI systems are less dependent. Based on the Islamic ethics, human beings are expected to be accountable as they are the vicegerent or *khalifah* of God on earth. Further, it has been stated that the AI must assist in the decision-making process yet the final one must be made by humans.

5. Discussion

In this paper, the results have revealed that the Islamic ethics represent one of the most suitable systems of implementation of AI in intelligent cities. Concerns about justice, mercy, and common good provide a comprehensive solution to the ethical issues of smart city technologies (Kamali, 2008; Mohadi and Tarshany, 2023).

5.1 The Islamic Ethics as an Intelligent City

Making sure that the technology development will not dehumanize human prosperity, instead of supporting it, the inclusion of Islamic principles in the design of smart cities is a potentially useful trend. Adl-justice suggests a very attractive standard of solving the problems of algorithmic fairness and digital disparities by referring to the reality that there must be fairness in the acquisition of the rewards of technology. Such light is the opinion expressed by Kamali, 2008; Mohadi and Tarshany,

2023. Similarly, AI systems are also guided by the Rahmah principle to develop human well-being and dignity. The AI-based monitoring systems in healthcare, including the ones that could offer quality healthcare to the underserved individuals, could, thus, preserve human life, *hifz al-nafs*, which is one of the fundamental aims of Shariah. Kamali 2008 has given the Maslahah-community-good-the-focus to the preference of common good in relation to the specialized technical or economic efficiencies. It can be applied in order to inform the decision-making on how AI can be implemented to ensure that technological development benefits the masses and not the small populations. In this case, the reasoning of Mohadi and Tarshany 2023 has been reflected.

5.2 Comparison of other Ethical Frameworks

As a matter of fact, the Islamic moral standards are comparable to the other normative ethical standards of the AI world such as values of beneficence, non-malfeasance, autonomy, and justice that are commonly discussed in the Western ethical discourse (Phillips, 2022). Nonetheless, Islamic ethics is much more sensible where such values are placed in a generalized worldview that emphasizes a human responsibility as a vicegerent of God on earth (Kamali, 2008; Mohadi and Tarshany, 2023). To some extent, such a vision can be applied to supplement current ethical frameworks to have a solid background to address the problem of role of technology in the life of human beings. The Islamic perspective on the concept of stewardship (*khilafah*) and the ways of improving life (*ta'mir*) are instructional in terms of the way AI should be designed and implemented in the benefits of human well-being (Kamali, 2008).

5.3 Threats and Competencies

Though the Islamic values of ethics are significant in informing the way of conceptualizing and handling the smart cities, practical concerns are presented, which in essence requires systematic solutions. The first significant issue is that the long-term and institutionalized process of coordination between the technical experts the AI writers, data scientists, urban designers, and the Islamic thinkers capable of sensing the ethical norms under the circumstances of the modern technology is required. It is necessary because without such interdisciplinary collaboration, the ethical explanations stand a high probability of being abstract and unconnected with the technicalities of the AI-based urban systems. The second burning issue is that it is necessary to develop concrete evaluative variables and quantifiable indicators that could be implemented in the use of whether AI applications align with the Islamic ethical norms like justice, privacy, dignity, and the common good. Without such working specifications, the policymakers and developers will be compelled to grapple with the effort of transforming the broad principles to working standards. The other problem is the difficulty of creating a governance system in which the aspects of ethics and religious controls are implemented into the decision-making process that will, in turn, guarantee that the use of AI is consistently put under strict scrutiny among diverse stakeholders, such as ethicists, representatives of the society, and religious scholars (Mohadi and Tarshany, 2023).

The transformative opportunities of Islamic ethical principles applied to the planning of smart cities are enormous, despite the dynamical nature of the challenges. It may offer a criterion against which the human good can direct technological innovation hence accessing such values as *adl* (justice), *amanah* (trust), and *maslahah* (public interest). The cities will become more productive and connected, as well as fairer and more human by developing AI-driven urban development on the basis of the ethical promises. It offers an opportunity in the shape of alleviating the painful technological rising that is often associated with the galloping technological advancement: social disintegration, information protection, and discrimination of algorithms and, generally, a decrease in human dignity. The emerging form of ethics contributed by Islamic would be a development whereby the technological innovations would not undermine the living standards and the social life of every citizen but enhance it.

6. Recommendations

Based on the findings, as depicted above with the assistance of this study, the recommendations as outlined below are therefore made in respect to the ethical integration of AI in Smart Cities in the Islamic perspective:

6.1 Develop a Framework of AI Governance using the Islamic Ethics

There is need to establish governance systems that incorporate technical skill and ethics which are grounded on the Islam values of justice, compassion, and common good within the cities. This can include development of two-level control mechanism including a Shariah Supervisory Board and AI Governance Committee, which is also suggested to be implemented to Islamic finance institutions (Mohadi and Tarshany, 2023).

6.2 In Partnership and Engagement

The stakeholders must be diversified as well as the views to regulate AI in smart city projects so that it can help them in making rational and informed decisions on the system design and implementation. To this end, community forums are put in place that assist in the debate that is going on between the technologists, religious scholars and citizens. The processes of participatory designs must be noticed due to the fact that the voices and experience of disadvantaged societies come to the centre of the decision making (Kamali, 2008).

6.3 Ethical AI: Implement Technical Solutions

Cities should also provide technical resolutions to ethical issues: e.g. create end-to-end solutions to detect and eliminate data bias, incorporate privacy-by-design solutions, establish systems of human control over AI, etc.

6.4 Encourage Technical-Religious Interaction

The technical professionals and Islamic scholars need to introduce a higher level of coordination with the view of making sure that Islamic moral values are integrated in the smart city development. This can be attained through interdisciplinary workshops and conferences, establishing education programs that can accommodate the related courses besides establishing research centres specializing in the subject of technology- Islamic ethics convergence.

6.5 Design Measures and Assessment instruments

It will still require the cities to establish the right measures and evaluation instruments to evaluate the AI systems against the Islamic ethical standards and this will entail the coming up with such instruments as ethical impact assessment, performance indices and periodical ethical checks on the AI systems.

7. Conclusion

More important, yet simultaneously, AI application in the framework of smart cities has offered unparalleled opportunities of efficiency, inclusivity, and innovation and provided critical problems in ethical terms that should be pursued cautiously. One of the most effective normative guidelines to navigate this complex landscape is the ethics of Islam which is informed by the principles of justice (*adl*) compassion (*rahmah*), accountability, and the desire to achieve the common good (*maslahah*). The conclusions of the paper justify the claims that AI-empowered system of high-ranking sectors such as transportation, health, and education are capable of consistent adjustment to Islamic moral

principles since both applicative aim and spirit are pegged on moral wilfulness. The guarantee of equal mobility services, loving and dignified health care through online channels, AI to help with more personalized learning opportunities-the channels through which these smart city projects convey the Islamic values, as well as to broaden the technological possibilities, they are both to assure the presence of new technologies and to grow them. The practical application of this kind of a vision, in its turn, will also be accompanied by the significant structural ethical concerns of the existing AI systems: the elimination of biases in the information, the presence of the privacy, the establishment of meaningful accountability models cannot be the preserve of technologists themselves.

It is coordination with and collaboration with other domains. It thus requires concerted actions by technologists, Islamic ethicists, urban planners, policy makers and players in the civil society in plotting how Islamic values can be rationally addressed in designing and management of smart cities. The suggestions offered in the paper are nothing more than an approximate sketch of such cooperation between the communities, which gives the real steps of the inclusion of the ethical consideration at every level of technological advancements. As a matter of fact, the conceptual and operative injection of the Islamic values of moral virtues into the smart city programs will ensure that technological advancement is employed to empower human blossoms rather than to diminish it. This set of ethics will gain mostly greater significance in the nearest future when the infrastructures of smart cities will continue to increase and become even more interdependent with the daily life. Ethical paradigm is an assistant of planning technologically developed, just, human, and accommodating urban environments that have the potential to cater the interests of all citizens in these zones. In any case, the clash of the AI-generated city development and the Islamic morality forms a terrifying path to the high-tech cities containing the human soul.

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