

Research Article

Ethics of AI Technologies as a Task in the Training of Public Civil Servants in the Republic of Uzbekistan

Toshpolatova Shirin Muxiddinovna*

Faculty of Social Sciences, National University of Uzbekistan, Tashkent, Uzbekistan

Abstract

This article analyzes the digitalization process in the Republic of Uzbekistan, a Central Asian country that currently holds a low position in the Government AI Readiness Index. The aim of the article is to provide an initial overview of the ethical norms required for public servants in the context of AI usage. To develop such a code, an exploratory foundation must first be established. The necessity for an AI Code of Ethics is also explicitly mentioned in the national strategy “Digital Uzbekistan – 2030”. The research uses both theoretical and comparative legal analysis. The survey was also conducted which measures the digital and ethical literacy and readiness to adopt AI technologies. According to the author, the factors hindering the implementation of AI into the professional activities of civil servants are, firstly, the insufficient level of AI skills among Uzbek civil servants, and secondly, there is an urgent need to develop a national system for the ethical regulation of issues related to AI in general, which are currently being developed. Voluntary adherence to international ethical codes for AI and the development of its own model for AI ethical regulation can reduce the level of cyber fraud in the country.

Keywords

Public Civil Servant, Government AI Readiness Index, AI Technology, Republic of Uzbekistan, Digitalization, Ethical Code

1. Introduction

Uzbekistan is a new independent democratic republic located in the heart of Central Asia, bordering former USSR republics to the north and east, and Afghanistan to the south. Nearby are Pakistan and Iran, countries from the so-called turbulent “Golden Crescent.” The syncretic approach of the traditional Uzbek mentality to analyzing the socio-political situation in the country and the world involves considering the moral and ethical aspects of processes and phenomena. The complex geopolitical location and moderately high birth rate give the professional activities of civil servants particular significance in the eyes of the population. It is not so much the election race, but rather the effectiveness of the state infra-

structure that predetermines the country’s stability. Through the work of civil servants, the state governs the country. In their professional activities, public civil servants relay ideological, political, and ethical priorities to the population. The Republic of Uzbekistan is integrated into the stream of global processes; it is not in isolation or self-isolation, and therefore faces new civilizational challenges. One such challenge is artificial intelligence. Artificial intelligence is a relatively recently emerged direction of scientific and technological progress and an important condition for the socio-economic development of any country in the era of globalization. The well-being of countries largely depends on how successful a

*Corresponding author: shirinmother85@gmail.com (Toshpolatova Shirin Muxiddinovna)

Received: 8 May 2025; **Accepted:** 22 May 2025; **Published:** 20 June 2025



Copyright: © The Author(s), 2025. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

particular country is in this race. To accelerate digitalization and the implementation of artificial intelligence technologies, the “Digital Uzbekistan – 2030” strategy has been adopted in the republic. The strategy implies increased attention to the digitalization of all sectors of the economy and in all regions of Uzbekistan.

2. Methods

The research utilized primary sources of Uzbek moral and didactic literature – adobnoma; philosophical-ethical analysis of contemporary national and international normative legal documents on digital ethics, as well as statistical indicators on the topic. Normative documents and statistical data underwent comparative analysis. During the research, we employed methods of applied sociological research. To identify the problems of digitalization in the Republic of Uzbekistan, we conducted a pilot survey using Google Forms among higher education students. The interpretation of ethical categories is given in accordance with the principles of Uzbek national ethics.

A random plot brief survey of Uzbek bachelor’s and master’s students (April 2025) was conducted to illustrate the seriousness of the situation with AI implementation in the country. The study does not claim full representativeness; it only helped to identify how respondents’ self-assessment of their AI usage skills corresponds to the practical formation of these skills. Students from various Uzbek universities participated reluctantly in the sociological study; 100 questionnaires were sent out, and responses were received from 41 respondents. The questionnaire consisted of five questions designed to identify the common reasons for AI usage, assess respondents’ ability to distinguish AI-generated text from human-written content, and gather general opinions about AI usage.

Limitations of the study include the small and non-representative sample size, which restricts the generalizability of the findings. The voluntary nature of participation may have introduced self-selection bias, as students with strong opinions or higher awareness of AI usage may have been more inclined to respond. Additionally, the use of an online format may have excluded individuals with limited digital access or proficiency, further skewing the sample. The questionnaire was intentionally brief, which limited the depth and scope of the data collected. Finally, the subjective interpretation of ethical categories based on national principles, while valuable, may limit cross-cultural comparisons.

3. Results and Discussion

All states are concerned with the advancement of AI technologies. For example, in the PRC, the state assigns a decisive role specifically to AI in transforming the country into a leading scientific and technological power. In 2017, the

PRC adopted the “Next Generation Artificial Intelligence Development Plan.” Artificial intelligence is a new sphere of international competition for modern states. In Uzbekistan, the “Digital Uzbekistan – 2030” strategy has been adopted, and the Decree of the President of the Republic of Uzbekistan dated 06.10.2020 states that the expanded implementation of AI will affect all branches and spheres, but it will be implemented “primarily in public administration, education, healthcare, and agriculture” [1]. It is difficult to say how deeply AI is currently being implemented in public administration, but steps are being taken in the education sector to address this task.

From the survey, approximately two-thirds of the respondents admitted to using AI when preparing term papers and research articles. They genuinely use AI applications, as they confidently indicated which applications they use: ChatGPT (the most popular application), Google (second most frequently used), Telegram. However, responses to the question “Do you know how to bypass AI detector applications?” showed that only 13 (approximately 30%) of the respondents know how to bypass them, meaning they possess a sufficiently high level of skills in working with AI applications. Another indirect indicator of students’ proficiency with AI was the last task of the questionnaire. It was necessary to identify which of the two short texts provided was created by neural networks and which by the author. The answers were distributed roughly equally: 20 respondents correctly identified the AI-generated text, 7 students made the wrong choice, and 14 respondents admitted “I don’t know,” whose answers we classified as incorrect choices. Although, in our opinion, the test was not difficult; contextually, the author’s text was more emotional, which primarily distinguishes an author’s text, even a strictly scientific one, from a generated, maximally formal AI text. There is an interpretation of AI that implies digital systems purposefully and logically processing information and undertaking primary analysis. These capabilities are initially embedded in computer technology. At the current stage, digital technologies have the ability not only to analyze but also to generalize data, and this qualitatively new level has been designated as “artificial intelligence.” It should be noted that our research focuses on “narrow” AI, which is created to solve one goal or several tasks. AI in the narrow sense is far from weak in terms of the scale and speed of tasks it can solve, especially if it is a generative model aimed at solving several tasks simultaneously and generalizing conclusions [13]. “Strong AI (otherwise ‘general’ AI, ‘superintelligence’) is akin to human consciousness; it can already make decisions under uncertainty, plan, and even empathize [2], containing an element of self-governance.” Such data were obtained from an online survey of Uzbek students, future qualified specialists. The actual AI usage skills of civil servants leave much to be desired. According to Uzbek analysts, training personnel, including public civil servants, in AI skills is the weak link in the implementation of the “Digital Uzbekistan – 2030” Strategy. According to the aforementioned

Decree of President Sh. Mirziyoyev, the promotion of AI technologies is foreseen primarily, note, where public civil servants work. These technologies contribute to the optimization of public service through the improvement of the digital skills of its personnel. The priority of implementing AI in public administration, education, healthcare, and agriculture does not exclude the relevance of automation in business, financial, industrial, and other sectors of the economy, as well as in the work of the media and national culture. As Uzbek researchers believe, the main problem in promoting modern IT technologies is the shortage of personnel with AI skills: “The lack of technical knowledge hinders the implementation of this field in most enterprises”; qualified specialists “are expensive and rare in the current market” [3]. To date, the country’s achievements in light of international criteria are assessed critically. There is a growing understanding in the republic that the implementation of AI in the economy, society, and culture cannot be avoided. Heads of Uzbek banks agree that “We will inevitably (emphasis added) evolve towards AI” [4]. In our view, the evolutionary approach should be replaced by the accelerated promotion of AI in various sectors of the economy and culture to avoid falling behind in the country’s economic and technological development. There are international indicators of a country’s readiness for AI implementation. Uzbek researcher Bakhromov A. A., relying on the international Government AI Readiness Index (IDC, Worldwide semiannual artificial intelligence systems spending guide), provides data regarding Uzbekistan. The index is calculated based on a set of 10 indicators, including governance and ethics; digital capacity, etc. The Republic of Uzbekistan ranks 95th [5] among 173 countries in this Index based on the aggregate of these indicators. The USA ranks 1st, Korea 7th, the Russian Federation 33rd, and Kazakhstan 64th. Improving the AI readiness index is possible only by increasing expenditures on research and development (R&D) and training personnel with the necessary AI knowledge in all sectors and regions of the country. For example, in the USA, R&D expenditures are covered approximately two-thirds by business and one-third by the state, with 4.5% being foreign investment. In the Russian Federation, conversely, business invests one-third in R&D, the state invests two-thirds, and 3% is foreign investment. In the Republic of Uzbekistan, 78% of R&D expenditures are borne by the state, 12% by business, and there is no foreign investment. (Data for 2010-2018) [6]. The state budget is unable to sufficiently finance R&D. The share of investment from Uzbek business is extremely limited. As mentioned above, one of the indicators of the Government AI Readiness Index is the degree of ethical use of AI. To improve this activity in the country, an Advisory Council under the Ministry of Innovative Development of the Republic of Uzbekistan for the implementation of the Code of Ethics in the field of AI was established in 2022. A draft ethical code for the use of AI was developed and adopted by this Advisory Council. The Code is recommendatory in nature; the ethical principles do not have the full binding force of legal acts.

Adherence to it means that the country will follow the principles declared in the Code of Ethics in the field of Artificial Intelligence [7]. This Code is not sufficiently developed, many provisions are declarative, yet it states the main ethical priorities of AI technologies, the chief among which is the priority of protecting the interests and rights of people and the individual. Several US government agencies, including the Office of Science and Technology Policy – OSTP (a department for science and technology policy within the US government), have developed 10 principles for AI decision-making. The principles for safe AI operation formulated by OSTP are as follows:

- 1) Public trust in AI (positive image);
- 2) Public participation (feedback);
- 3) Scientific integrity and information quality;
- 4) Risk assessment and management;
- 5) Benefits and costs (weighing the utility);
- 6) Flexibility (adaptability);
- 7) Fairness and non-discrimination;
- 8) Disclosure and transparency (how AI is applied);
- 9) Safety and security (of personal data);
- 10) Interagency coordination [8].

The principle of fairness and non-discrimination mentioned in this list has a direct ethical character. Overall, all principles in the OSTP list are aimed at minimizing the harmful consequences of implementing AI technologies. The main precaution against abuse in the AI sphere, according to the authors of this document, is regulation by the government and the public. Experts believe that adherence to these principles will encourage government agencies to hire more personnel with technical knowledge, create more reliable AI applications, and ultimately lead to more thoughtful regulation. In the worst case, these standards could become a bureaucratic hurdle for AI development [9]. Another version of an AI ethics code is the UNESCO “Recommendation on the Ethics of Artificial Intelligence” [10]. The UNESCO approach is also based on human rights and consists of 10 principles, similar to the American document:

- 1) Proportionality and do no harm;
- 2) Safety and security;
- 3) Privacy and data protection;
- 4) Multi-stakeholder and adaptive governance and collaboration;
- 5) Responsibility and accountability;
- 6) Transparency and explainability;
- 7) Human oversight and determination;
- 8) Sustainability;
- 9) Awareness and literacy;
- 10) Fairness and non-discrimination.

The AI ethics developed by UNESCO specialists are similar to the principles of infra-ethics in general. In particular, “Within computer ethics, four main principles have been developed, on the observance of which, among other things, moral codes are based: 1) privacy; 2) accuracy; 3) property (private property); 4) accessibility” [11]. The main ethical

requirement of infra-ethics is the principle of non-interference in a person's private life and the principle of respect. In AI ethics – public safety and risk management. The next theoretical problem of the digitalization process in Uzbekistan is the role of AI in personnel recruitment, primarily for the public civil service. In many countries and transnational companies, recruitment platforms are being created where AI filters out unsuitable candidate applications for the desired position, conducts checks, analyzes information from social networks, specialized websites (e.g., Ministry of Internal Affairs), and private online communities. This speeds up the search for applicants for a vacant position for which the required qualities have been specified in advance. The work of AI does not cancel out the personal interview; it assists the HR department, accelerating their activities. Recruitment specialists believe that entrusting the screening of applicants to AI does not pose a great risk, but the accuracy of automated systems for personnel selection and management, as global experience has shown, requires serious refinement, i.e., investment in the development of appropriate programs. In particular, the Russian Federation is conducting an experiment on selecting employees for public service using AI on the "State Personnel" recruitment platform, which allows automating the processes of selection, professional development, motivation, evaluation of officials, formation of professional culture, and countering corruption [12]. Based on the description of the experiment's tasks, it also assesses the candidate's ethical characteristics, motivation, and anti-corruption attitude. The Academy of Public Administration is responsible for training state personnel in the Republic of Uzbekistan, but it does not use AI for recruiting and initial screening of candidates. Such AI capabilities will compel those aiming for a career in government structures to be mindful of AI tracking biographical facts, including dubious ones; at the very least, it will force applicants to erase virtual traces of illegal and immoral acts. In this regard, there is a dual motive for using AI in hiring civil servants: on the one hand, to automate the labor-intensive hiring process, and on the other hand, to simplify the impartial verification of a candidate's personal data. It might seem that AI would create an ideal hiring system. However, the final choice is made by a human; the system will offer several candidates. The human factor cannot be dismissed. AI cannot block manifestations of nepotism, corrupt components, or personal animosity. This is particularly relevant for the Republic of Uzbekistan, where patronage of relatives and acquaintances regardless of their professional qualities persists, and where the rate of job growth lags behind population growth. Using AI in hiring is not always solely advantageous. The use of AI in recruitment sometimes raises concerns. Researchers have noted that AI can violate candidates' rights (the case of gender inequality in AI recruitment at the online retailer Amazon, 2015). AI can write texts, draw, compose music, conduct interviews, teach, and generate solutions to complex problems. The question arises: will AI replace the public civil servant? Can a public

civil servant cope with the entire volume of routine work? Will a technically proficient employee replace a traditionally trained specialist?

4. Conclusion

Based on the positions outlined above, the following conclusions are justified. The pool and professional qualities of individuals applying for positions as civil servants are particularly important for the effectiveness of public administration. The republic experiences a shortage of personnel with quality professional education in the AI sphere. Our pilot study revealed that among students, future qualified specialists with higher education, the level of practical AI skills is not high in the era of global digitalization, although approximately half of the respondents stated they use AI in their academic preparation. An analysis of the problems of AI technology functioning in the public sector showed that the central problem is teaching civil servants AI skills. Personnel in state institutions possess insufficient information culture overall, let alone skills in working with AI systems. The seemingly natural solution is to hire personnel with technical knowledge. However, in our view, the dominance of a technocratic approach risks creating imbalances. To avoid diminishing human involvement in decision-making, a set of measures and tools for ethical control are being developed. In all the ethical codes reviewed during the research (the Code of Ethics in the field of AI, the OSTP code, the UNESCO code), common points are highlighted, for example, the principles of fairness and non-discrimination, responsibility and accountability to the public, data protection, and privacy. By non-discrimination, these AI ethics codes primarily mean gender equality. These rules ensure the fair representation of all, diminishing the spread of misinformation [14].

The norms and values of AI ethics, despite their validity, are not absolute; they manifest through personal moral choice. The goal of ethics is to turn the aspiration for virtue into a conscious routine habit, not into an unexpectedly random impulse or feat. AI does not solve human problems; it is merely a means to solve them. It is not technogenic systems that fall under the rules of human morality, but the people who create them.

In the Republic of Uzbekistan, there is a high need to develop and implement a national code for working with AI, which would be based on the national interpretation of ethical categories and specific resources of ethical education (traditional instructive literature, national way of life, etc.).

AI is being introduced into the sphere of public service not only during the work activities of civil servants, but already at the very beginning, at the stage of recruiting and hiring applicants for public service.

On an individual scale, AI surpasses the abilities of a single trained public civil servant. However, the collective public consciousness, in our opinion, is capable of learning to control artificial intelligence. In our view, the confrontation between natural human intelligence and the AI created by it is overly

dramatized. The problem lies in how adequately workers will be trained to work with AI in line with the progress of AI technologies. The implementation of AI must proceed simultaneously with the modernization of the personnel training system, among the first – public civil servants. Constant training in AI skills is necessary.

The use of AI technologies is a dialogue between human and system; the human is not excluded from this interaction, at least for now. The worker not only inputs data and sets parameters for the AI system, but also learns in the process of working with AI, hopefully, capable of learning enough to control the work of AI. The best technical training is not a guarantee that a civil servant will not be biased when making decisions, corruption-free, and fully responsible. Decisions based on the data provided by the AI system are made by a human. One can only hope for the moral maturity of this specialist.

The growth of qualifications and responsibility towards civil society, strict adherence to ethical norms are priority directions for improving the professional competence of public civil servants of the Republic of Uzbekistan. Attention to the professional-ethical competence of civil servants contributes to the efficiency of public service, thereby strengthening public accord, stability, and the well-being of the country.

Abbreviations

AI	Artificial Intelligence
OSTP	Office of Science and Technology Policy
UNESCO	United Nations Educational, Scientific and Cultural Organization

Author Contributions

Toshpolatova Shirin Muxiddinovna is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The author declares no conflicts of interest.

References

- [1] Decree of the President of the Republic of Uzbekistan “On approval of the strategy ‘Digital Uzbekistan – 2030’ and measures for its effective implementation” <https://lex.uz/docs/5031048>
- [2] FIT. Artificial Intelligence: Structures and Strategies for Complex Problem Solving. [Internet]. Available from: <https://www.cs.unm.edu/~luger/ai-final/tocfull.html> [Accessed 19th May 2025].
- [3] Khojaeva D. F., Omonov A. A., Tugizboev F. U. (2021). Problemy, s kotorymi mozno stolknut'sya pri vnedrenii iskusstvennogo intellekta [Problems that can be encountered during the implementation of artificial intelligence]. *Nauka, Tekhnika i Obrazovanie [Science, Technology and Education]*, (5 (80)), 23-26.
- [4] GazetaUZ. «Мы неизбежно эволюционно придём к ИИ». Банки Узбекистана — о внедрении в работу искусственного интеллекта. [Internet]. Available from: <https://www.gazeta.uz/ru/2024/03/06/ai-banks/> [Accessed 19th May 2025].
- [5] Bakhromov A. A. (2022). Vyzovy i perspektivy upravleniye razvitiyem tekhnologii iskusstvennogo intellekta v Uzbekistane [Challenges and prospects for managing the development of artificial intelligence technology in Uzbekistan]. *ECO-NOMIC SCIENCES / Colloquium-journal*, #6 (129), p. 34.
- [6] Abdullaeva B. Yu. (2022). Povysheniye effektivnosti innovatsionnykh protsessov na predpriyatiyakh tekstil'noy promyshlennosti [Improving the efficiency of innovation processes in textile industry enterprises]. *International Journal of Theoretical and Practical Research*, 2(4), p. 110.
- [7] Kodeks etiki v sfere iskusstvennogo intellekta [Code of Ethics in the field of Artificial Intelligence] <https://ethics.a-ai.ru/>
- [8] Guidance for Regulation of Artificial Intelligence Applications <https://www.whitehouse.gov/wp-content/uploads/2020/01/Draft-OMB-Memo-on-Regulation-of-AI-1-7-19.pdf>
- [9] MIT Technology Review. The US just released 10 principles that it hopes will make AI safer. [Internet]. Available from: <https://www.technologyreview.com/2020/01/07/130997/ai-regulatory-principles-us-white-house-american-ai-initiative/> [Accessed 20th May 2025].
- [10] UNESCO. Ethics of Artificial Intelligence. [Internet]. Available from: <https://www.unesco.org/ru/artificial-intelligence/recommendation-ethics> [Accessed 20th May 2025].
- [11] Dedyulina M. A., Papchenko E. V. (2014). Professional'naya etika. Uchebnoye posobiye dlya bakalavrov [Professional Ethics. Textbook for bachelors]. Rostov-on-Don, p. 100.
- [12] Mirapolis. Тренд на HR-автоматизацию и найм госслужащих с помощью ИИ — главные новости сентября. [Internet]. Available from: <https://www.mirapolis.ru/blog/trend-na-hr-avtomatisaciui/> [Accessed 20th May 2025].
- [13] Builtin. What Is Artificial Intelligence (AI)? [Internet]. Available from: <https://builtin.com/artificial-intelligence> [Accessed 20th May 2025].
- [14] McKinsey & Company. What is generative AI? [Internet]. Available from: <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-generative-ai> [Accessed 20th May 2025].