



ARTIFICIAL INTELLIGENCE AND CURRENT APPLICATIONS: EXAMPLES FROM CENTRAL ASIAN COUNTRIES

Artificial Intelligence (AI) is used in practice in various fields, from the banking sector to healthcare. Although the term “Artificial Intelligence” was used for the first time in 1956, the development and introduction of this technology in practice have accelerated only in recent years. In this regard, the possibility of collecting sufficient information and developing necessary algorithms are among the reasons for the widespread use of AI technology nowadays.

The main goal of creating AI was to imitate the mental activity of a person. The principle of operation of AI is to work with a large amount of data and the fast processing of this information by intelligent algorithms based on the patterns contained in the data, which allows AI to learn without human intervention. Today, artificial intelligence development studies are carried out in a wide variety of fields. These include information screening within the framework of established rules; a neural network that simulates human thinking; computer vision that searches for objects according to patterns; and voice assistants that help you recognize and synthesize speech.

Modern AI is able to learn from its own experience and adapt to the desired goals and objectives. In the modern world, it is difficult to imagine life without AI, since it is used everywhere: voice assistants in smartphones, voice management systems in smart homes, robotic technologies in the manufacturing industry, athletes' training, and making a diagnosis in medicine. The fact that the share of efficiency and accuracy offered by AI in line with its concrete goals and duties is surprisingly high makes our lives easier. Moreover, based on available data, AI can make realistic forecasts for the future. For example, the Canadian BlueDot monitoring system warned of the possibility of an outbreak of the coronavirus epidemic back in December 2019, before an official statement by the World Health Organization earlier this year.

Modern AI systems are used in various fields such as the banking sector, call centers, user support services, online stores, smart video surveillance systems, etc. In Kazakhstan, Sberbank is the leader in using AI in the banking sector. It already provides loans for small businesses, relying on AI calculations. The bank also uses this method when hiring new employees to work at its branches: this, for example, makes it possible to predict how quickly a job seeker can quit. Thus, the AI system gives an applicant scores, which show how quickly a person wants to leave the job. For a bank, this is a good way to save and reduce staff turnover. Kaspi Bank has long been using biometric data when working with clients. Using biometric data, the bank can remotely identify

its customers – for example, to issue loans or withdraw cash through ATMs without a credit card. Thanks to the introduction of voice assistants in the Kcell mobile company, the number of lost calls was reduced by three times, and the number of callers who had been provided necessary service by operators for less than a minute increased by 35%.

In other Central Asian countries, some AI works are undertaken for different purposes in various fields. For example, Uzbekistan aims to strengthen the control of water resources with the electronic Serap project. Thanks to electronic systems, it is planned to obtain information about water inlet and discharge, pollution rate, purification, and reuse, which could allow more efficiency in using these data. In Kyrgyzstan, work is underway on the development of mobile applications that help teach the Kyrgyz language. Tajikistan aims to transform the TajRupt.AI project into a research and development center covering entire Central Asia by 2025. The TajRupt.AI center, which provides training in the field of AI, was established with the financial support of the Islamic Development Bank's Science, Technology and Innovation Transform Fund. On the other hand, Turkmenistan establishes technology competence centers within the University of Communication and Information Technologies. These centers are working on the development of electronic document systems and the development of new systems for use in education and health.

It is known that similar efforts are undertaken within Safe City projects, which are being developed in all of the countries of the region or have been operating in some of them. For example, the Sergek video surveillance system developed by the experts of the local company Korkem Telekom was launched in Kazakhstan. The main objective of the system is to find violators of the traffic rules on the road. Sergek records driving at excessive speed, the passage on the red traffic light, unauthorized entry into a public transport lane, as well as violations of road sign requirements. Moreover, Sergek can search for vehicles by cameras and recognize people's faces, even if they are wearing masks, which allows for preventive measures, including identifying vehicles with false numbers, finding stolen cars, crime suspects, and tax evaders. These services will be used within the Safe City project in Kazakhstan. However, the introduction of such technologies requires various amendments to the relevant laws and large-scale financing.

The Safe City project began to be implemented in Uzbekistan since March 2017, and the system is used to detect those who drive through a red traffic light and exceed

the speed limit. The video surveillance system that automatically records violations is located at 115 junctions of the capital, and this number is planned to be increased to 280. The Safe City project in Kyrgyzstan was launched in February 2019. It is planned to establish camera systems in the cities of Bishkek and Osh, as well as along the Bishkek-Karakol and Bishkek-Manas Airport highways, with partnerships to be established between public and private companies in the next three years. In this context, private companies such as Vega have recently introduced their cameras called “patrol radar” that record traffic violations. The violations recorded by these cameras will be sent to the database of the Infocom company. There, by comparing the information in the necessary automobile and driver databases, penalties will be imposed on those responsible. Regarding the developments in Tajikistan, the Safe City project has been in operation in Dushanbe since November 2013. China's telecommunication company Huawei, which established this system, also carries out technical service activities. The Safe City project in the capital of Turkmenistan, Ashgabat, has been carried out by the Russian company Vocord since June 2009. There are video systems that detect traffic violations in 80 city streets and at 53 junctions.

In summary, we can say that the use of AI has already caused radical changes in our lives. Firstly, people will increasingly shift their simple jobs onto machines. However, this will not only make life easier but will also eliminate many jobs. The question remains what to do with people who have lost their jobs. They will have to be retrained or seek alternative work. At the same time, with the development of technology, IT specialists will be in strong demand in all areas of life. Secondly, searching for people by photo and video thanks to surveillance systems will help in finding people who are missing or dangerous for society, allowing authorities to track their movements for further detection or capture. However, such systems have the potential to violate human rights and freedom, as the governments will be capable to keep everyone under control. Therefore, the possibility that new technological developments may have some problems besides its benefits should not be ignored. On the other hand, how the state will apply these developments also depends on society. For these reasons, in cases such as the continuous use of AI technology, all members of society need to be aware of its pros and cons. Finally, new legal regulations and changes in existing laws should be made regarding the control of these issues, which occur in parallel with the developments in AI technology.

Politics, Foreign Affairs, and Security

- According to Tajikistan's Central Election Commission, the People's Democratic Party headed by President Emomali Rahmon won the parliamentary elections and will retain control over the country's parliament. The preliminary election results show that Rahmon's party won 50.4% of votes, securing 47 out of 63 seats, while other five parties managed to exceed the 5% threshold and secured at least one seat each in the legislature. The voter turnout was more than 86% (RFE/RL, 02.03.2020).
- During his visit to Kazakhstan, newly appointed Deputy Chairman of the Russian Federation's Security Council Dmitry Medvedev met with President Kassym-Zhomart Tokaev. The parties discussed the current level and prospects of bilateral relations and paid special attention to issues of international and regional security, including measures taken by the two countries to combat the spread of the COVID-19 outbreak. One of the issues addressed during the meeting was the constitutional reform in Russia (Akorda, 06.03.2020).
- Prime Minister of Armenia Nikol Pashinyan paid a visit to Georgia to hold negotiations with his counterpart Giorgi Gakharia. The parties discussed a number of issues of mutual interest such as regional security, trade and economic cooperation, and regional projects in the energy, transport, transit and other fields. The prime ministers also exchanged views on cooperation in high technology, education and science (Primeminister.am, 03.03.2020).
- President of Azerbaijan Ilham Aliyev received Defense Minister of Georgia Irakli Garibashvili to discuss the development of bilateral strategic partnership, including in the military field, and the participation of the two countries in joint regional projects such as the Baku-Tbilisi-Kars railway, the Baku-Tbilisi-Ceyhan oil pipeline and the Southern Gas Corridor (Sputnik, 06.03.2020).
- President of Belarus Alexander Lukashenko held a meeting with CSTO Secretary General Stanislav Zas in Minsk to discuss issues related to the CSTO agenda for 2020. In particular, the parties addressed legal arrangements related to the introduction of the organization's observer and partner statuses, as well as joint activities of the CSTO member states, including military training exercises and operations to counter drug trafficking, illegal migration and cybercrime (CSTO, 05.03.2020).
- The delegation of the Embassy of Turkey in Ukraine held a meeting with Deputy Interior Minister of Ukraine Tetiana Kovalchuk to discuss measures to step up bilateral cooperation in ensuring maritime and border security. Such cooperation between the two countries is aimed at enhancing efforts to combat cross-border crime and other threats, as well as to improve border-crossing procedures. The parties also discussed the possibility of training Ukrainian police officers and border guards at educational establishments of the Turkish Foreign Ministry (Ukrinform, 05.03.2020).

Economy, Finance, and Energy

- President Tokaev held an emergency government meeting to discuss the financial and economic situation in the world and its impact on Kazakhstan's economy. The president ordered to establish a rapid-response headquarters that will develop an anti-crisis action plan to deal with the fallout of oil prices and the resulting devaluation of the national currency. The plan must focus on fulfilling all social obligations, despite expected budget cuts, including support for employment (Akorda, 09.03.2020).
- The government of Uzbekistan held a meeting to discuss the findings of a comprehensive analytical assessment of cooperation with the Eurasian Economic Union (EAEU) and its impact on the national economy. The assessment was made by the working group, composed of representatives of relevant government agencies, on the basis of studies and recommendations of independent consulting companies, research institutions, and experts. The government will submit a proposal to join the EAEU as an observer country to the parliament for further consideration (Podrobno.uz, 07.03.2020).
- During his visit to Belarus, Foreign Minister of Hungary Peter Szijjarto stated that the European Union (EU) would benefit from closer cooperation with the EAEU. Mentioning the importance of the EU's Eastern Partnership policy directed at deepening relations with six post-Soviet countries, including Belarus, the minister proposed easing sanctions against Minsk (Hungary Today, 03.03.2020).
- The Kyrgyz Ministry of Economy announced that the WTO Appellate Body would evaluate the actions of Kazakhstan concerning the transit of goods from Kyrgyzstan. The Kyrgyz side insists that Kazakhstan uses border checks as a hidden trade obstacle in the struggle for control over the flows of goods from China to Russia. According to the Ministry's statistics, the number of trucks crossing the Kyrgyz-Kazakh border declined by 22% from 93,612 in 2018 to 73,652 in 2019 (EU Reporter, 09.03.2020).
- According to the Ministry of Economy of Azerbaijan, a preferential trade agreement recently signed between Azerbaijan and Turkey will contribute to a further expansion of bilateral trade relations. The document envisions mutual exemption of certain goods from customs duties which currently range from 10% to 150% of their value. The countries plan to increase mutual trade turnover from \$4.5 billion in 2019 to \$15 billion by 2023 (News.Az, 05.03.2020).
- At a special session of the Ukrainian parliament, lawmakers voted to accept the resignation of Prime Minister Oleksiy Honcharuk and approved Deputy Prime Minister Denys Shmyhal as the new head of government. The parliament also approved other cabinet members, including new foreign, defense, and finance ministers. The government reshuffle came after Ukraine's unsuccessful negotiations with a mission of the International Monetary Fund to unlock a long-delayed \$5.5 billion loan (RFE/RL, 04.03.2020).

Society and Culture

- A session of the Council of Chiefs of Public Health Services of the EAEU member states held in Minsk was aimed at preventing the spread of the COVID-19 infection. The participants, joined by representatives of Uzbekistan and Tajikistan, discussed the epidemiological situation in the EAEU countries and their containment plans against the new virus. They emphasized the importance of exchanging information about transit passengers or persons who came in close contact with people who contracted the virus (BelTA, 03.03.2020).
- The opening ceremony of a center named after Abu Nasr al-Farabi took place at Lithuania's House of National Communities. Kazakh diplomats, local officials and turkologists attended the event. The center aimed at developing cultural and scientific interaction between Kazakhstan and Lithuania will acquaint visitors not only with writings of the great scientist but also with Kazakh culture and traditions (Kazinform, 04.03.2020).
- The Ministry of Education and Science of Kazakhstan and the International Turkic Academy (TWESCO) organized a meeting of Kazakh historians in Almaty chaired by Minister of Education and Science Askhat Aimagambetov and TWESCO President Darkhan Kydyrali. The participants discussed a number of topical issues related to history of Kazakhstan and highlighted the need for journals and academic programs in the field of history (TWESCO, 05.03.2020).
- A delegation of the EU member states' ambassadors led by EU Ambassador to Kazakhstan Sven-Olov Carlsson traveled to Shymkent and Turkestan. During their visit, the EU representatives held meetings with regional officials to discuss the further development of EU-Kazakhstan relations and promising fields for cooperation. The European diplomats were also briefed on the region's investment and business opportunities and visited the leading industrial enterprises. At the Khoja Akhmet Yassawi International Kazakh-Turkish University, the diplomats held an interactive discussion with the students (Kazinform, 07.03.2020).
- The Ministry of Culture and Tourism of Turkey translated selected works of President of Uzbekistan Shavkat Mirziyoyev into Turkish and published them in a book entitled "New Uzbekistan with a great future". Turkish President Recep Tayyip Erdogan wrote a preface to the book, which was published in 1,000 copies. The first copy of the book was handed to President Mirziyoyev at the opening ceremony of the Nation's Library under the President of Turkey in Ankara (UzDaily, 03.03.2020).
- Well-known Azerbaijani writer and poetess Narmina Mammadzadeh was awarded with the "Anton Chekhov 160 years" medal for her contribution to Russian literature. Her story called "The Door" was included in the Anthology of Russian Prose 2019, which is an annual multivolume book edition of the Russian Writers' Union (AzerNews, 04.03.2020).