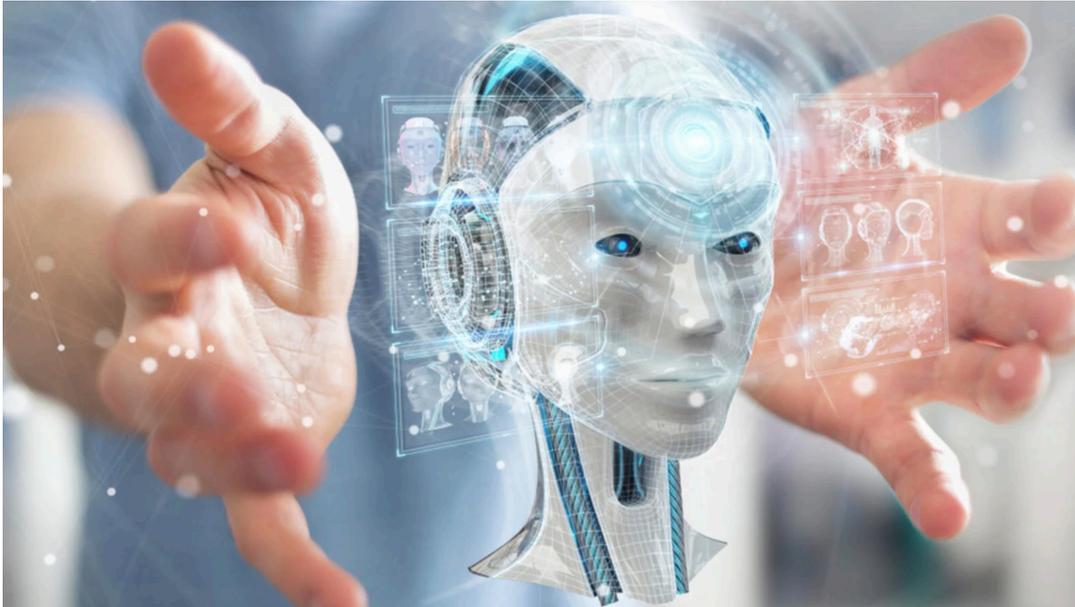**البوابةalbawaba**
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What is the Role of Artificial Intelligence in Modern Art?

Lulwah Al-Homoud and Daniah Al-Saleh will be among the leading artists showcasing their work at the event in St. Petersburg, Russia, next month.

Two Saudi artists are to take part in a major international exhibition aimed at exploring the role of artificial intelligence (AI) in modern art.

Lulwah Al-Homoud and Daniah Al-Saleh will be among the leading artists showcasing their work at the event in St. Petersburg, Russia, next month.

The new exhibition, organized by the Russian Direct Investment Fund (RDIF) and the State Hermitage Museum, will be launched during the St. Petersburg International Economic Forum (SPIEF).

The Saudi duo will join with artists from throughout the world for the expo, titled "Artificial Intelligence and Intercultural Dialogue," which will open in the Hermitage's general staff building (historical archive hall) on June 6, the first day of the SPIEF gathering and part of its cultural program.

Kirill Dmitriev, CEO of the RDIF, said: "The development of intercultural dialogue is RDIF's important long-term mission. This exhibition is our new initiative aimed at promoting this dialogue and creating the trust needed for successful trade and investment."

He added: "For this exhibition, we brought together artists of different nationalities, all of whom are using AI technologies. We are able to witness a new form of art being created. We hope that people from different nations will find it easier to understand each other through this art of the future."

He said: "We are very pleased that the exhibition of the world's best AI art is taking place during the St. Petersburg International Economic Forum at the Hermitage, one of the most renowned museums in the world. This exhibition reiterates Russia's cultural and technological leadership."

The RDIF and its international partners are already investing in AI technologies which, according to experts, could add $13 trillion to the global economy by 2030, drastically transforming many sectors. Many countries are already developing their own AI programs.

Al-Homoud has developed an abstract graphical form of language developed from the Arabic alphabet, which some predict could become a universal language.

AI technology is used to process large volumes of data, including images. In recent years, the use of AI has helped to achieve revolutionary results in cybersecurity, banking and marketing, as a result of facial-recognition technology.

AI-based contemporary art has received global attention following "The portrait of Edmond Belami," a painting created by the French art group Obvious which sold at Christie's for $432,500 on Oct. 25, 2018.
Artists and computer programers from Obvious used generative-adversarial network (GAN) algorithms, designed in 2014 to create the painting. GAN is able to simultaneously run two algorithms. One algorithm constantly generates images, while the second one processes them, filtering out the failed images.

The invention of GAN has enabled AI systems to process information in a manner that is closer to that of the human brain. This enables it to use imagination and take a critical approach to the received information. The activity of both algorithms in GAN is balanced and excludes conflict, allowing for the best results.

Three artworks from Obvious, as well as pieces from other AI-based art specialists, will be exhibited for the first time in Russia. Most of the works are a result of creative processing by large AI algorithms.

Mikhail Piotrovsky, CEO of the Hermitage, said: "The Hermitage Museum always welcomes the experiments where art and science demonstrate their similarities and readiness to enrich each other. The artistic exploration of artificial intelligence continues the important process of humanization of science."

An installation from Italian artist Davide Quayola will represent the AI "view" of French impressionist paintings, while the work by Turkey's Refik Anadol, "Machine Hallucinations," has been created using the latest GAN algorithm, which processed 100,000 photographs of Gothic and modern architecture.

The work of Kostya Novoselov, who won the 2010 Nobel prize for physics after discovering the material graphene, will examine the limits of machine learning, drawing parallels with artworks created by humans.

The exhibition is the RDIF's new initiative aimed at promoting dialogue between cultures. It builds on earlier successful cultural endeavors by the fund, including organizing concerts by the Mariinsky orchestra, and a Russian avant-guard art exhibition in Saudi Arabia in 2019, in partnership with Saudi Aramco and the Kingdom's Public Investment Fund (PIF).

Exhibition participants also include Mario Klingemann from Germany, Chinese artists Sun Xun and Aaajiao, Russia's Egor Kraft, ::Vtol::, and Novoselov in collaboration with Zhestkov Studio, Team Void from South Korea, American computer animator Jonathan Monaghan, and Norimichi Hirakawa of Japan.

Dmitry Ozerkov and Victoria Kondrashova are the curators of the exhibition, which will run until July 7.