

Inaugural Robot Games Show Prowess

Voice of the World

Edited by GONG Qian

The 2025 World Humanoid Robot Games, the first of its kind in the world, wrapped up on August 18 in Beijing after emerging as a proving ground for cutting-edge advancements in robotics technology.

The three-day games featured 280 teams from 16 countries including the U.S., Germany, Japan and Brazil to compete across 26 events. The events included traditional sports like track and field, gymnastics, soccer and martial arts, as well as application-based tasks like moving materials, medicine sorting and cleaning in various scenarios such as factories, hospitals and hotels.

According to Robotics & Automation News website, the games have garnered extensive international media attention, with 97 overseas outlets and 282 reporters covering the event, spotlighting robotics' growing global appeal.

Alan Fern, a robotics professor at Oregon State University, said that the games highlighted rapid advancements in the industry. This included the affordability of humanoid robots and AI advancements that enable humanoid



Humanoid robots compete in a 100m race during the opening ceremony of the 2025 World Humanoid Robot Games in Beijing, August 14, 2025. (PHOTO: XINHUA)

robots to perform a broader range of basic tasks like running and jumping.

Meanwhile, the games showed that the tech has limitations after some robots were seen tripping over each other, needing a human operator to help guide them.

Still, many overseas news outlets noted that the games demonstrated China's latest breakthroughs and its advantages in robotics. *The Guardian* said

the games displayed China's prowess in humanoid robotics, a technological field that has been pushed to the forefront of the country's AI industry.

Reuters reported that in recent years, Chinese humanoid robots have demonstrated increasing feats of agility. This could be evidenced by a robot from Unitree Robotics, who won the gold medal for the 1,500-meter indoor track event with a time of six minutes and

34.40 seconds at the games.

The games are part of China's efforts to be at the forefront of robotics innovation. In recent months, China has staged a series of high-profile robotics events, including the 2025 World Robot Conference and the world's first humanoid robot half-marathon.

Reuters analyzed that China is building its edge in humanoid robotics by investing heavily and focusing on the sophistication of its AI models. "China's advances in AI are allowing humanoid developers to pair the robots' already impressive hardware with the software needed to make them economically valuable," Reuters said.

Another clear advantage is China's domination of the production of core hardware components as the country is capable of making up to 90 percent of humanoid components, Reuters said.

"It is becoming apparent that national support for 'embodied AI' may be far greater in China than in any other nation, driving continued innovation and capital formation," Sheng Zhong, Morgan Stanley's head of Industrials Research, said in a report.

As China has rolled out a national plan to build a world-class humanoid industry by 2027, it is expected that the country will pour more support into the industry to bring more innovation for the world.

China's Ascent as a Global IP Powerhouse

Opinion

By LIANG Yilian

In recent years, through institutional reform and deepening international

cooperation, China has actively positioned itself as an IP powerhouse, emerging as a country that is setting global IP standards in fields as diverse as cultural creativity, biotechnology, robotics and green technology.

For five consecutive years, China has led the world in international patent

applications under the Patent Cooperation Treaty system, a sign not only of its innovative capacity but also of stronger institutional support for commercialization and enforcement.

This transformation is perhaps most visible in cultural exports. Works like *Black Myth: Wukong* and *Ne Zha 2* are redefining how Chinese culture reaches global audiences, spanning games, films and literature. Labubu's entry into European and American markets rests not only on creative appeal, but also on reinforced copyright registration and a digital rights management.

In robotics, unicorns such as Unitree Robotics have become standard-setters, filing patents across motion control, machine vision, and human-machine interaction. Their quadruped and humanoid robots, already recognized globally, are backed by intellectual property strategies.

In green and low-carbon technology,

China's patent applications in 2024 were 2.3 times of those in 2020, underpinned by the global rise of the country's new trio of exports — electric vehicles, lithium batteries and solar products.

China has also been steadily strengthening its global intellectual property partnership network. As of September 2024, it had established stable cooperative relations with over 80 countries and regions, and is currently implementing more than 200 intellectual property cooperation agreements. This facilitates developing new international intellectual property cooperation. From 2020 to 2024, the total annual import and export volume of intellectual property usage fees in China rose from 319.44 billion RMB to 398.71 billion RMB, with an average annual growth rate of 5.7 percent.

China's IP advancements are fostering an ecosystem where innovation can thrive — benefiting not only China but also its partners worldwide.

Tech Boosts Transportation Industry

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The 22.13-kilometer tunnel opened a new shortcut linking the southern and northern parts of China's Xinjiang Uygur autonomous region, reducing the time taken to drive across the middle section of the Tianshan Mountains from several hours to about 20 minutes.

During the 14th Five-Year Plan period, over 90 percent of the main framework of the national transportation net-

work has been constructed, connecting over 80 percent of administrative counties and serving about 90 percent of the population.

"Only through independent innovation in key technologies can we lead the world," said Song Shenyou, chief engineer of the Shenzhen-Zhongshan Link.

Green solution

On July 2, China's first methanol

dual-fuel container ship, COSCO SHIP-PING YANGPU, completed its maiden voyage to Yangpu Port in Hainan province in south China and was refueled with green methanol derived from urban kitchen waste and animal manure. The development of domestic dual-fuel ships and green fuels will boost the low-carbon transformation of China's shipping industry.

Rows of photovoltaic panels can be

seen along the Jinan-Weifang Expressway in Shandong province in east China. This 161.9-kilometer expressway is China's first zero-carbon expressway, with an average annual carbon reduction of 61,000 tonnes.

According to a report released by the China Association for Science and Technology, China has built 33 green highway demonstration projects and 53 green ports.

Through innovation, China is contributing green solutions to the sustainable development of global transportation.

goals over a decade-long expedition: collecting samples from the near-Earth asteroid 2016HO3 and exploring the main-belt comet 311P, which is more distant than Mars.

The CNSA will steadily advance deep space exploration missions such as the Tianwen-3 Mars sample-return mission and the Tianwen-4 Jupiter exploration mission, and will continue the solar exploration project based on the success of Xihe solar exploration satellite. In addition, China plans to build space infrastructure for civil use and develop satellite Internet systems.

Space Tech Rockets in 14th FYP Period

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He said, "During the development of the sampling and packaging system, we made breakthroughs in fundamental technologies including new materials and components, therefore our steps have become more solid and determined."

China is accelerating the Chang'e-7 and Chang'e-8 missions, said Shan Zhongde, head of the China National

Space Administration (CNSA). While advancing high-quality cooperation under the Belt and Road Initiative, the country is actively promoting the construction of an international lunar research station.

Deep-space exploration

China's exploration of the universe is not just confined to the moon and it is forging ahead into deeper space.

On May 15, 2021, the Tianwen-1 probe landed on Mars, following the

Zhurong rover a week later. In November of the same year, the Tianwen-1 orbiter successfully entered the remote sensing orbit and conducted a global remote sensing survey of Mars. China became the first country to achieve the three major goals of Mars orbiting, landing and roving in a single mission.

On May 29 this year, China launched its first asteroid sample-return mission, Tianwen-2, to achieve multiple

Comment

Rise of AI Companions Raises Concerns

By GONG Qian

AI companions are not a new thing. Foreign apps like Character.ai and Replica, and Chinese apps like Zhumengdao and Maoxiang have gained wide popularity among the younger generation for their unique personalities.

According to a new study by Common Sense Media, 72 percent of U.S. teens aged 13 to 17 have used AI companions at least once, and over 52 percent qualify as regular users. Among the participants, 33 percent of teens use AI companions for social interaction and relationships.

The emergence of AI companions marks a significant milestone in technological progress. From a technical standpoint, their development is built on the combined breakthroughs of several core technologies.

Advances in natural language processing allow machines to understand complex human emotions and engage in near-human conversation. Computer vision enables AI to recognize facial expressions and body language, detecting subtle emotional changes. The optimization of deep learning algorithms endows AI with continuous learning capabilities, enabling it to adjust behavioral patterns based on users' habits.

These technological advances allow AI to address deep-seated emotional and psychological needs, fostering strong — sometimes irreplaceable — emotional bonds and interactive experiences between AI and humans. As a result, some users may develop AI companion dependence or even "addiction."

However, while AI companions bring emotional comfort and convenience, they have not been without their fair share of controversies.

The immediate concern is emotional dependence. The responses of AI

companions, though empathetic in appearance, are generated by algorithms rather than genuine emotional experience. Long-term reliance on such simulated feedback may cause users to blur the boundary between real and artificial emotions, thereby reducing their ability to perceive and handle real emotions in daily life. This is especially true for adolescent groups, where excessive immersion in virtual companionship may hinder the natural development of their social skills and exacerbate social anxiety in real life.

Another major risk is privacy leakage. Some AI companion platforms collect extensive personal data, such as chat histories, emotional states and lifestyle patterns. The study showed that 24 percent of teen users have shared personal or private information with AI companions. Although technology providers promise data protection, risks such as hacker attacks and platform data management loopholes always exist. More alarming is the potential misuse of emotional data for commercial gain or behavioral manipulation, such as exploiting psychological weaknesses to push tailored content or influence values and judgments.

Content safety is also a concern. The training data sources of AI companion models are extensive, and some data collection and screening are not strict, which leads to the risk of spreading harmful or inappropriate information.

To address the problems, policymakers and technology companies must work together to create a safer digital future without endangering young people. Meanwhile, these issues highlight the need for a balanced approach: embracing the benefits of AI companionship, while still maintaining a critical and rational perspective on human-machine relationships.

Hi-Tech

AI-powered Crop-breeding Robot

By GONG Qian

Chinese researchers have recently developed an AI-powered crop-breeding robot called "GEAIR" (Genome Editing combined with AI-based Robotics), marking a major step toward fully automated and high-speed hybrid breeding. The breakthrough, published on August 11 in the international journal *Cell*, introduces a crop-robot co-design strategy for the first time.

This approach redesigns crop floral structures via gene editing, thus making the crop itself to be robot-friendly, according to the research team led by the Institute of Genetics and Developmental Biology of the Chinese Academy of Sciences. By combining biotechnology with AI, it promises to overcome long-standing bottlenecks in hybrid breeding and seed production, reducing costs, shortening breeding cycles, and greatly improving efficiency.



Researchers adjust the AI-powered breeding robot GEAIR. (PHOTO: XINHUA)