Young visitors try out a Baidu AI product at the World Internet Conference in Wuzhen. ZHU XINGXIN / CHINA DAILY

Baidu pushes on all fronts to get AI working in real world

Search giant invests in a host of projects to integrate smart systems into our lives

By FAN FEIFEI
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Chinese internet search giant Baidu Inc is ramping up efforts on the industrial application of artificial intelligence technologies, as the country shapes up to be an innovator in digital transformation.

The development of AI will usher in a golden period as it is applied on a massive scale, with open platforms making integrated AI solutions more accessible to businesses, said Robin Li, co-founder, chairman and CEO of Baidu.

"AI is no longer just something 'cool', it's now widely recognized by everyone and has become a national strategy," Li told China Daily ahead of the sixth World Internet Conference held in Wuzhen, Zhejiang province. "We need to push forward the applications of AI in various areas amid the new wave of transforming industries to boost efficiency and create value with technologies."

AI is changing a lot of industries from finance, property, education, healthcare to automotive, and Li is seeing fast-track growth in AI applications. In September, Baidu announced an upgrade to its cloud plus AI strategy. It will elevate the position of its cloud computing unit, Baidu Cloud, whose AI capabilities are accessible to dozens of industries.

The Chinese government has laid out an ambitious strategy and pledged support to innovations and encouraging applications. In recent years, intelligent transformation has topped the agenda of many companies, driving the demand for technology solutions powered by AI.

"Today, the development of an AI application needs to be supported by a combination of technologies, enabling integrated solutions to meet evolving demands," Li said. "While under the big wave of AI, one company cannot do everything."

According to a study by global consulting firm Deloitte, China is predicted to spend 2.8 trillion yuan ($395 billion) in digital transformation this year. The figure is expected to surge to 3.2 trillion yuan in 2020 and 3.7 trillion yuan in 2021. Manufacturing, governments and financial services are the top three spenders for digital transformation in 2019.

As a pioneer in driving the development in AI and its integration of various industries, Baidu has been working to open up its AI technologies to encourage collaboration with partners and developers and accelerate technological advances.

In its core search engine plus feed business, AI is helping Baidu evolve. On Baidu search, the rate of the first result satisfying users' needs has reached 51 percent. In addition, search is extending from mobile phones to smart speakers and intelligent vehicles.

"Today, we are using AI to redefine search, because the evolution of a search engine is the evolution of AI," Li said.

In information feed, which provides a flow of data to users based on their demands and interests, Baidu has also been growing fast in the past two years with its AI strengths. Offering entertainment is what many mobile apps are doing, but Baidu hopes AI-based information feeds can help people learn and grow.

Recently, the Beijing-based tech heavyweight has made significant progress in autonomous driving. It launched a trial operation of the Apollo robotaxi in Changsha, Hunan province. The first batch of 45 self-driving taxis are running on urban roads.

"This is a significant step for Baidu and the industry, as it does not just mean robotaxis have left laboratories and gone into the market. It is also a step toward intelligent transportation and smart cities," Li said.

Zhang Xueru, a senior analyst from Shanghai-based research group 86Research, said that although the AI initiatives are unlikely to pay off financially any time soon, Baidu has proven its capability to commercialize AI technology in a broad range of applications at a pace and scale that is hard to compete with. Zhang added that Baidu's efforts in the AI sector will be the driving force for the company's growth in the long term.

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>
> **Robin Li,** co-founder, chairman and CEO of Baidu

Tech companies spending more on cybersecurity to tackle emerging threats

By FAN FEIFEI

With the internet of things, big data and cloud computing booming, the cybersecurity sector has entered a period of rapid development. In response, Chinese enterprises should beef up their cybersecurity, said Qi Xiangdong, chairman of Chinese security company Qi An Xin Group.

"In the internet era, we mainly prevent data leakage, breaches and network paralysis. While in the age of cybersecurity, we are more concerned about the system security issue related to the key infrastructure," Qi said.

"In the world of internet of things, we should consider how to guarantee the operation of key infrastructure and numerous internet devices," Qi said.

Qi added the cybersecurity industry had seen changes in clients, from personal users to business clients, underlining the increasingly important role of cybersecurity.

"Along with the rapid development of 5G, IoT, artificial intelligence and other emerging technologies, the annual revenue of the cybersecurity sector will surpass 1 trillion yuan ($141.3 billion) in a decade," Qi said. He added that his company has attached importance to security in the industrial internet and called for more investment in this field.

Qi explained that hackers prefer governments and companies instead of personal users as targets nowadays, with the aim to undermine social stability and gain specific economic interests.

Qi added the B2B (business-to-business) segment will usher explosive growth into the cybersecurity industry. Moreover, IT and security professionals play an indispensable role and are in urgent need.

In May, Qi An Xin Group inked a strategic partnership with the State-owned China Electronics Corp. The two will cooperate in technological innovation, resource integration and major projects. Rising concern for network security has called for more cooperation between governments, enterprises and institutes.

Qi An Xin has also made a string of achievements in core technologies related to key information infrastructure and cybersecurity. They offer security services in overseas countries and regions, including Indonesia, Singapore and Canada.

Li Aidong, the deputy director-general at the cybersecurity coordination bureau of the Cyber space Administration of China said in an earlier interview more effort is needed to develop the cybersecurity industry and to tackle risks and challenges posed by new technologies and applications.

Li emphasized that enterprises play a major role in the innovation of security technologies. Moreover, there is a need to strengthen the protection of key information infrastructure, which is the nerve center of the economy and society, and the top priority of network security, he said.

$17.9 billion
expected value of cybersecurity market in China by 2023

According to a report from global market research firm International Data Corp, China will continue to lead growth of the global cybersecurity market over the next five years. The market size is expected to reach $17.9 billion by 2023.

The compound annual growth rate for China's cybersecurity spending between 2019-23 will be 25.1 percent. This outstrips the global average of 9.44 percent, the report said.

China's cybersecurity spending in 2019 will reach $7.35 billion. Government, communications and financial sectors will see the most cybersecurity expenditure. They will account for roughly 60 percent of the sum. IDC also estimates that global cybersecurity expenditure will surpass $150 billion by 2023.

Emerging technologies such as AI and 5G will set higher requirements for cybersecurity, according to a recent report by global accounting firm PwC.

"We are seeing that many enterprises in China, particularly tech-savvy companies, are increasingly sensitive to the potential damage cyberthreats pose. Consequently, prudent companies in China continue to leverage cybersecurity as a competitive advantage and are taking preemptive action to reduce their exposure," said Lisa Li, cybersecurity and privacy partner with PwC China.

Delegates chat at the Qi An Xin Group's exhibition booth at the World Internet Conference. PROVIDED TO CHINA DAILY

Latest technology unleashed to offer comfort and safety to guests

By HE WEI
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A torrent of technologies from artificial intelligence, 5G networks and augmented reality are making the World Internet Conference in Wuzhen safer, smoother and smarter.

Security procedures were given a digital makeover as scanners that use facial recognition to identify entrants within the blink of an eye were added, organizers said in a news release.

Checkpoint systems at entry and exit points were also upgraded with millimeter wave technologies, which feature large bandwidth, high resolution and low interference. These characteristics ensure increased security and cost efficacy, because the machines stand to detect any prohibited or restricted items with minimal human intervention, said technology provider China Communication Technology.

To ensure smooth operation, an intelligent power supply control room was put into use in the water town. Real-time monitoring, automated patrol robots and ozone sensors were applied to maintain operational excellence.

Backed by a system dubbed electrical digital twin, utilities are able to harness a single source of data across their entire IT landscape, said Ju Linhao, vice-director of marketing at State Grid Zhejiang Tongxiang Power Supply.

"This allows our staff members to have a full understanding of all power supply control rooms through a centralized platform that can perform real-time analysis and report malfunctions, boosting data accuracy and a high level of automation," he said.

Imagine a bus driving down the street with nobody behind the wheel. This futuristic scene is something that attendees of this year's WIC can experience. Bus fleets named "Ne Zha" are transferring passengers across exhibition halls. The buses are guided by cameras, laser radars and a master controller.

As well as traffic light responses, the buses are installed with 5G telecom modules and can avoid obstacles, perform an emergency stop and pull over.

What's more, intelligent devices are installed on these vehicles to detect drivers' tiredness and other risky behaviors like smoking and phone calls.

Meet-and-greet robots are scattered across the venue, interacting with visitors with expo introductions, quizzes, meeting reminders and other relevant information. Other robots offer convenience to guests by cleaning and delivering parcels and meals.

Hospitality is also getting an intelligent boost. New functions allow online booking and pre-check-in with a few taps on a smartphone.

However, the real game-changer is identity authentication using facial recognition and other biological indicators developed by Cethik, a subsidiary of China Electronics Technology Group.

When applied on a massive scale in the future, these features can effectively circumvent long queues at hotel receptions by designating rooms before a customer's arrival and predicting potential peak hours based on registration records.

On the retail front, customers can scan a QR code, choose an item from a vending machine and complete payment in real time, backed by object recognition technologies.

Augmented reality is lending a helping hand to those who have trouble selecting their outfit. A "magic mirror" system allows customers to instantly see themselves in the clothes they pick.

By factoring in gender, age, climate and other preferences, it can make recommendations, removing the need to shuttle between clothing racks and changing rooms.

Self-driving bus fleets that transfer passengers across exhibition halls have become a highlight at the ongoing World Internet Conference. PROVIDED TO CHINA DAILY