

Right people provide the edge in AI

Attracting the best talent is a priority for Chinese firms competing globally in artificial intelligence

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Nearly 11 years ago, Gao Jianqing was searching for the job of his dreams. Fresh from the School of Computer and Information at Hefei University of Technology, in East China's Anhui province, he was looking to break into the artificial intelligence (AI) industry.

It was a challenging period for the young graduate.

"Back then, artificial intelligence was not a subject that cropped up," Gao said. "It would take many years before AI became a hot topic like it is today. Most of my classmates chose to work for the booming Internet and software sectors instead of choosing AI-related jobs."

Gao finally found the right opening to go with his passion for voice recognition technology when he joined iFlytek in 2006. The fledgling firm had an AI research institute and was at the forefront of voice recognition development. For Gao, it also had the benefit of being conveniently

located in Anhui province.

Since then it has joined the ranks of the Most Innovative Growth Companies in Asia, according to *Forbes*, with a core business that includes speech technology research, development and marketing of software applications, system integration and hardware products.

"During the past decade, the number of AI employees at the institute has grown at a high rate," said Gao, 34, who is now vice-president of iFlytek's AI research institute. "We have around 500 staff in the AI research institute, up from 15 in 2005."

In the past few years, iFlytek has set up a series of research labs with domestic and overseas universities and institutes. These include Tsinghua University in Beijing, the University of Science and Technology of China in Anhui province, the Harbin Institute of Technology in Northeast China's Heilongjiang province, and York University in Canada.

"Collaboration is of mutual benefit to our company and the academic world," Gao said. "We offer business insight and data, while the schools



Audience members sit on "floating platforms" during a TV program about artificial intelligence at a China Central Television studio in Beijing. The country has quickly developed a thriving AI industry. XINHUA

provide cutting-edge research and expertise.

"During the cooperation process, we work together to train talented people in new AI-related skills," he added.

iFlytek is just one company among an array of high-tech firms looking to hire artificial intelligence engineers in China.

With big data and mobile Internet technology sectors booming, the country has quickly developed a thriving AI industry. But finding the right people has been crucial to its success and vital for its future development.

Many of China's big Internet players are looking at overseas options to stay one step ahead of the competition.

Tencent, known for its popular messaging service WeChat and gam-

ing sites, announced in May it would open a research lab in the United States city of Seattle. Heading the operation will be Yu Dong, a former Microsoft research scientist.

Zhang Tong, director of Tencent's core AI lab, said: "We hope the AI facility will not only be a laboratory, but also a connector to bring together the world's leading talent."

Zhang was previously director of big data at search engine Baidu. And, in many ways, Tencent is following in the footsteps of Baidu. The Chinese search engine rolled out an AI lab in California's Silicon Valley nearly three years ago and has since set up a second facility.

Didi Chuxing, the Chinese ride-hailing company, has a research operation in the same area.

Naturally, signing up exceptionally talented professionals for the next

wave of research and development in artificial intelligence has become a priority.

A report by networking site LinkedIn showed that out of a total of 1.9 million technical AI professionals in the world, only 50,000 work in China. As many as 850,000 are employed in the United States, which still dominates the sector, the report revealed.

Wang Di, vice-president of technology at LinkedIn China, said that China has the greatest market potential, outside the US.

Gao, of iFlytek, tends to agree with that view.

"There are sufficient AI-related professionals in terms of image recognition coming from domestic colleges and universities," he said. "And many leading global researchers also have Chinese backgrounds, which will help us recruit them."

Companies look to hire from US, Europe

Staying at the cutting edge demands that Chinese AI enterprises recruit top professionals and offer lucrative packages

By **CHINA DAILY**

China is beefing up efforts to attract highly skilled professionals to work in AI as companies across the world scramble to get an edge in this cutting-edge field.

A report released by Hays showed that Chinese mainland enterprises have stepped up plans to hire staff involved in the artificial intelligence industry from the United States and Europe.

Many firms were offering lucrative packages to attractive candidates, including a 50 percent salary rise to relocate to China, the global recruitment agency stated.

"We are seeing significant government and private investment in AI across natural language processing,

computer vision, speech recognition and data science," said Simon Lance, Hays' managing director for China.

Earlier this year, the government launched plans to invest heavily in research programs.

The aim is to turn the country's AI sector into an industry worth more than 150 billion yuan (\$22.9 billion) by 2020, 400 billion yuan by 2025, and 1 trillion yuan by 2030.

"As a result, employers in the artificial intelligence space are becoming particularly competitive in their efforts to attract top people," Lance said.

But China faces key challenges and a skills gap compared with the US. A major problem is that the country lags behind the world's biggest economy when it comes to employ-

ment numbers. Its AI talent pool is only half that of the United States, a situation which could hinder future development of China's AI industry, a report from the Tencent Research Institute said.

The survey, conducted by a division of Internet giant Tencent, showed that by June this year, China had 592 artificial intelligence companies with nearly 40,000 employees. In comparison, the US had 1,078 AI businesses with more than 78,000 employees.

The US is also ahead in four key employment areas, including processors and chips, and machine learning applications, as well as natural language processing and smart drones.

More than 20,000 people work in the natural language sector in the

US compared to China's 6,600, the Tencent report highlighted.

Studies also found that Chinese AI staff are concentrated in sectors such as automated vehicles and smart medical treatment. In the US, the focus is on wider sectors.

"One of the reasons that China lags behind the US in AI is because it started much later," the Tencent report stated.

Among the world's top 20 universities for artificial intelligence research, 16 are in the US, including the Massachusetts Institute of Technology and Carnegie Mellon University, according to the American National Science and Technology Council.

Not one Chinese university made the list.

"Up until now, China has not

established a system to cultivate talent in AI," said Yu Youcheng, deputy secretary-general of the Chinese Association for Artificial Intelligence.

"For example, artificial intelligence science and technology have not been set up as a first-level discipline," Yu said. "This may lead to the loss of core AI talent."

But the problem can be fixed by putting the right pieces of the jigsaw together.

"We should work to develop an ecological chain in the AI field," Yu said. "This would combine AI talent cultivation, technology standards and products and applications."

"(Doing this, we can) transform and upgrade the whole industry."

Cheng Yu contributed to this story.