# Demand for AI talent intensifies

## Burgeoning artificial intelligence sector sees companies scrambling to recruit qualified workers

By **HOU LIQIANG**
*houliqiang@chinadaily.com.cn*

**An applicant** attends a job interview at Alibaba, which requires potential employees to have 10 years' experience in the field of artificial intelligence. XU KANGPING / CHINA NEWS SERVICE

In June, 365 students will graduate with master's degrees from the School of Electronic and Information Engineering at Xi'an Jiaotong University, in Northwest China's Shaanxi province.

However, unlike many of their peers from other schools, they will not be frantically searching for jobs. All of the graduating Jiaotong students have already been snapped up by employers.

More than half of them will work in China's burgeoning artificial intelligence (AI) industry, which focuses on emerging technologies such as self-driving cars, electronic speech translators and data mining.

Prospects are bright in the sector. Young AI engineers can earn as much as 300,000 yuan ($47,400) a year, which is 11 times the average per capita disposable income in China, according to the National Bureau of Statistics.

Each of the students has received at least two job offers, and some have even received seven, said Liu Qia, who heads the school's graduate employment program.

That is the result of a severe shortage of qualified talent in the sector. In 2016, an official from the Ministry of Industry and Information Technology said China's AI sector had a shortfall of more than 5 million qualified workers.

"In the past five years, it's generally been tough for graduates in all disciplines to find jobs, but our school has never really experienced any difficulties," Liu said.

She added that she has never seen such fierce competition for talented workers as in the AI sector at present, with both the number of companies growing and job vacancies rising rapidly.

"Campus recruitment usually begins after September, but last year, some companies came during April. The final tally was about 500," she said.

In 2013, Baidu, China's dominant search engine, recruited one graduate from the school; this year the number is 14.

"Five years ago, few well-known AI companies looked for talent in Xi'an because there were plenty of qualified people in East China where these businesses are headquartered," Liu said.

According to Wang Yixin, a senior vocational counselor at recruitment website Zhaopin, the number of companies in the sector is rising to meet growing demand as AI is being applied to a larger number of traditional industries.

However, universities have failed to provide enough qualified graduates, which has resulted in the recruitment battle escalating, he said.

A report by the Wuzhen Institute, a Chinese think tank, showed that 1,477 AI companies were founded in China between 2000 and 2016, and they attracted combined financing of about $2.8 billion. The report noted that in 2016, the value of China's AI industry was about 10 billion yuan and it is expected to reach more than 34 billion yuan next year.

Big data analysis conducted by Zhaopin, which has 135 million users, showed that between the first quarter of 2016 and the third quarter of last year, demand for qualified people rose by 179 percent, resulting in the search intensifying and recruiters starting to look overseas.

In response, many employers have lowered their recruitment thresholds, according to Wang.

Zhaopin's research suggests that about 33 percent of companies in the sector specify no work experience requirements, while about the same proportion only require candidates to have spent three to five years in the industry. Moreover, the educational threshold for 95 percent of companies is a bachelor's degree or even a lower qualification.

Despite the sector's rapid development, China still lacks the innovative talent that would make it a world leader by 2030, as required by a guideline issued by the State Council, China's cabinet, in July.

However, the country's abundant data resources and strong government support will assist in training new talent and narrowing the gap with developed countries, experts said.

The core of AI is to offer products that have the ability to provide automatic services in highly uncertain environments.

Unfortunately, instead of producing core innovations, most Chinese AI companies and engineers are simply applying existing technologies, said He Qing, deputy secretary-general of the Chinese Association for Artificial Intelligence, who noted that innovative talent is scarce.

According to Zhaopin, one of the biggest problems is that AI companies are having great difficulty recruiting high-end talent, such as specialists earning 15,000 yuan to 35,000 yuan a month. At present, about 40 percent of AI engineers work at lower levels, earning 10,000 yuan to 15,000 yuan a month.

In addition, multinational companies have also joined the search for AI talent. Late last year, Google announced the launch of a new AI research center in Beijing.

The center aims to employ local talent, according to Li Feifei, chief scientist at Google Cloud AI and Machine Learning, writing on the Google blog website. "We've already hired some top experts, and will be working to further build the team in the months ahead," she said.

According to the Wuzhen Institute, the arrival of international companies is likely to prove beneficial for the sector.

"Accomplished veterans are scarce in China's AI industry, but the country is rich in bright, hardworking computer science graduates with expertise in AI-related fields. These are the people international giants prefer," the institute said in a statement.

It added that Microsoft and Google have established research institutes or centers in Beijing to attract graduates from Tsinghua and Peking universities, two of the country's top schools. "These graduates will receive great training if they work for companies of that caliber," the institute said.

China still lags behind the United States in many AI indicators, such as the scale of financing and number of patents registered. Despite that, the country's giant market and the unparalleled amount of data generated by its 1.4 billion citizens will ensure that it will be able to attract the talent it requires, which will offer engineers more training opportunities.

"That training will gradually provide China with its core AI talents," the institute said.

The institute also noted that many leading Chinese AI scientists work in industry, not academia, so greater cooperation between universities and businesses in fields such as research and design, as well as the application of technology, would provide a good mechanism for the training of high-end talent.

Xin Jingming, deputy director of the Institute of Artificial Intelligence and Robotics at Xi'an Jiaotong University, endorsed the idea of enhanced cooperation between universities and industry.

"AI differs from other sciences because it can be applied to many different fields in a wide range of industries. There is not a single sector that AI could not help," he said, adding that breakthroughs in the sector are often the result of ideas generated by such cooperation.

Moreover, he noted that AI is strongly related to other industries, such as electronics and manufacturing, which can be a source of strength. "Japan is more developed than China in AI development as a result of strong support from other industries," he said.

"However, China also has inherent advantages as a result of the national commitment to promote the development of AI, which will help make the sector prosperous."

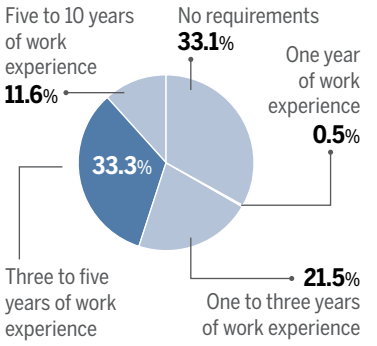
According to the Wuzhen Institute, despite the current uncertainty about which country will eventually dominate the AI sector, the competition to recruit talent is only just beginning.

"Data and talent are the keys to the development of AI, and the global battle for talent will continue because it takes time to overcome shortages such as the one we are seeing at present," the institute said.

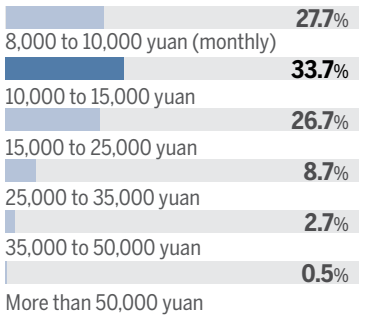
*Jiang Chenglong and Zhu Fangjie contributed to the story.*

### THE QUEST FOR INTELLIGENCE

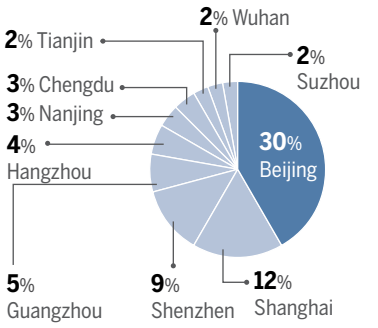
**Requirements for applicants**



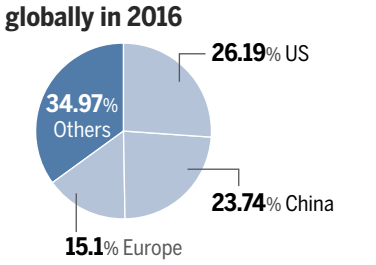

**Proportion of jobs offered within each pay band**




**Top 10 cities in the AI sector, and the proportion of vacancies available in them**




**AI companies as a proportion of newly founded businesses globally in 2016**




Sources: The Wuzhen Institute, Zhaopin Online Recruitment Co

CHINA DAILY