

Microsoft to deepen AI push

Tech giant to team up with healthcare players to support emerging system, resolve challenges

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Microsoft Corp plans to deepen its artificial intelligence push in China by teaming up with healthcare players and empowering them with algorithms needed to prevent and detect certain diseases, according to the company's top executive in China.

Through partnerships with United States pharmaceutical major Eli Lilly and Co and Chinese image cognition startup Airdoc, the tech giant plans to create an AI-powered ecosystem in China that can reduce the burden on the country's growing healthcare system, said Alain Crozier, CEO of Microsoft in China.

"China is going to play a fantastic and big role in this field ... we (need to) make sure companies partner together in order to resolve some of those big challenges that not only touch China but the rest of the world," Crozier told China Daily in Shanghai.

Under the agreements, Microsoft will extend its AI and cloud computing capabilities in the realm of medical imaging and disease screening to its partners, and will optimize workflow such as digitalization of medical records using natural language processing.

For example, by looking at someone's retina, Microsoft and its partnering firms can determine whether that per-



Consumers check out products at Microsoft's booth at a tech fair in Beijing. PROVIDED TO CHINA DAILY

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son is likely to develop diabetes through image analysis powered by algorithms.

The potential for AI in healthcare cannot be overstated and China is moving rapidly to master the tech-

nology. A recent International Data Corp report suggested that the AI-backed healthcare market in the country is predicted to reach \$930 million by 2022.

Microsoft is joining a wave

of companies delving into the smart medicine field. Google Inc is investigating how deep learning can be applied to digital pathology by creating an automated detection algorithm that can naturally complement pathologists' workflow.

Royal Philips NV now adopts diagnostic imaging solutions to detect early symptoms of certain diseases in the lungs, breasts and other areas.

China's domestic tech conglomerates have also sniffed out an opportunity, with both Alibaba Group Holding Ltd and Tencent Holdings Ltd setting up dedicated research units for developing AI diagnostic tools.

By working with more than 100 hospitals nationwide, voice recognition specialist iFlytek is working to improve clinicians' workflow, where doctors' voice diagnosis can be translated into digital texts in real time.

Crozier said Microsoft's strength lies in the profound partnerships it has forged in China and the vast resources it can leverage from its global network.

"Through partnerships companies can bring you a set of data that will enrich the solutions and algorithms that you provide," he said. "Sometimes it is an even better solution because it will be open for others to participate in the ecosystem."

Apple supplier embraces robotic automation

NANCHANG — In a factory workshop in Ji'an county in East China's Jiangxi province, an automatic curing machine is spraying ultraviolet glue on the components of Apple earbuds relayed along a conveyor belt.

Four years ago, it was Zhao Bulan, a post-90s worker, that sprayed the glue with gloved hands. Now, she only needs to check the components on a routine basis.

"It's certainly a lot better to work with these robots [machines]," said Zhao who works for a factory affiliated with Luxshare Precision Industry Co Ltd, a Guangdong-based supplier of Apple's earbuds, "although UV glue is a green product, it has a pungent smell and workers might be allergic to it."

Four years ago, a production line required four workers, capable of producing 1,000 pieces per hour. Now, the number can reach 1,200 pieces with half the number of workers, said Jiang Rui, who works with the robotics branch of Luxshare Precision.

The factory introduced more than 30 glue-spraying machines, one of the many tailor-made robots developed by the robotics branch of Luxshare Precision for intelligent manufacturing.

"A glue-spraying machine costs more than 100,000 yuan (\$14,585) while the previous labor costs were more than two times the cost of the machine," Jiang said. "Moreover, the quality of products is consistent, and workers are protected from being exposed to the glue."

In 2014, Luxshare started a robotics R&D project in Ji'an with over 50 researchers and an annual research budget of more than 3 million yuan. The project now has nearly 100 pieces of high-precision machine equipment and more than 100 automated machines are developed each year.

"Nearly 80 percent of the robotic devices are designed for labor-intensive fields that may pose health risks to workers," Jiang said. "Such intelligent upgrading enables us to protect workers from occupational diseases."

Steps away from the glue-spraying machine in the

80 percent

share of robotic devices that are designed by Luxshare for labor-intensive fields that may pose health risks

workshop, an auto scanner is working on another production line to read the data stored in the QR codes of the products. A few years ago, the scanning was conducted by workers with operating rods. Eight hours of exposure to infrared lights caused discomfort to their eyes. As a result, it was not easy to secure a stable flow of workers for such jobs.

"Nowadays, on average, each worker is required to have two weeks of training," said Chen Xuemei, production manager of the Ji'an branch of Luxshare Precision. "A highly automated factory helps workers to learn skills quicker. To meet Apple's requirements, a production line solely relying on manual work used to require more than 900 workers, but now we only need 600 workers with the help of machines."

The Ji'an branch now owns two production lines for Apple's Bluetooth headsets, with a monthly output of 400,000 sets. Later this year, four more lines will be put into use. "Machines are not taking the jobs away. Instead, we are considering recruiting more to operate the increasing number of machines," Chen added.

"Robotic equipment helps enterprises stabilize employment. Fewer workers are needed for an automated production line, but the growing lines require more skilled workers," said Liu Shaohua, deputy director of the management committee of Ji'an high-tech development zone.

According to data released by Luxshare, the company has produced more than half of the total output of Apple's high-end Bluetooth headsets since 2005. It hired nearly 10,000 workers in Jiangxi in 2010, and the number grew to 16,000 by the end of last year.

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People experience Apple's new iPhone XS and iPhone XS Max during a media tour at an Apple office in Shanghai on Friday. REUTERS

Online sticker makers eye off-screen opportunities

XIAMEN — Online stickers are not only a quintessential part of everyday life in China, but also a profitable business.

Lin Dongdong, CEO of Xiamen-based sticker developer Starmoly, often dreams of creating animated characters as famous as those made by Walt Disney. And it might just happen.

Rumi the panda, Moer the raccoon, and an egg named Waang are among the animated stickers created by Lin's company that have become online celebrities across China.

Stickers are groups of moving graphics used to communicate and express emotions by social media users. They generally comprise images, animated gifs, viral quotes, anime scenes, or TV and film stills.

Lin said that users, mainly on China's leading messaging and social media app WeChat, have made over 1.4 billion downloads and sent 40 billion Starmoly stickers to date.

Thanks to the development of smartphones and the internet, more Chinese are using instant message services. Tencent has reported that there are over 1 billion monthly active accounts on WeChat.

Lin said there was not a clear profit model for stickers at the beginning as most of them were free. Although some users gave tips to sticker creators, this was just a drop in the ocean for developers.

He started developing merchandise, such as cushions, toys and ornaments, decorated with popular stickers.

Sticker dolls were one of his first products.

"Many young people like to display dolls on their office desks or beds. On Dec 12, a shopping festival in China, we sold thousands of sticker dolls, and revenue of our online store was 300,000 yuan (\$43,756)," Lin said.

The company also yields profits from its intellectual property.

In April, Starmoly earned 1

“Now we are promoting an intellectual property protection program.”

Meng Xiangyuan, head of Taobao's sticker business

1.4 billion

the estimated downloads of stickers on WeChat, China's leading messaging and social media app

million yuan by granting intellectual property rights to furniture sellers on Taobao, a leading e-commerce platform.

One month later, it allowed a dairy firm to use Starmoly's stickers on its milk packaging, earning more than 800,000 yuan from the deal.

Another sticker company Manmao in the city of Fuzhou in Fujian province also took the same path as Starmoly. Their stickers are printed on pillows and table lamps.

The company also turned the stickers into dolls and put them in claw machines. So far, 24 claw machine stores use such dolls in various cities, including Hangzhou in Zhejiang province, Quanzhou and Xiamen in Fujian, and Guangzhou in Guangdong province.

"Almost everyone uses stickers when they communicate on chat apps. Stickers have gained popularity because they help spice up user messages that are best expressed quickly, not in words but through interesting or funny images," said Hu Liwei, CEO of Manmao. "A large population of social media users are potential consumers for our

derivative products."

On Taobao, there are about 400,000 items related to stickers, covering categories such as toys, furniture, clothes and digital products.

"Now we are promoting an intellectual property protection program," said Meng Xiangyuan, who is in charge of Taobao's sticker business. "We have established a platform for sticker creators, through which they can authorize use of sticker intellectual property rights to sellers."

But Lin has bigger ambitions. To increase the popularity of his stickers, he has organized exhibitions, and plans to cooperate with eminent artists to manufacture products combining stickers and artists' works.

"The commercial value of stickers is beyond our imagination. We should render their artistic value to help them live longer in the public eye and people's hearts," he said.

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Bamboo trees help villagers grow local wealth and beauty in Sichuan



A villager makes handicrafts by using bamboo in Yibin, Sichuan province, which has abundant bamboo resources. JIANG HONGJING / XINHUA

CHENGDU — Working hard to cook dishes made from different parts of bamboo in his restaurant, Liao Song welcomes the busiest time of the year at the Shun-an bamboo tree resort.

Liao, 36, owns a restaurant in the city of Yibin, in Southwest China's Sichuan province. Located in the upper reaches of the Yangtze River, the city has a climate favorable for growing bamboo.

"When I was young, my parents would cut down the bamboo and sell them to a local bamboo products factory to make ends meet for our family," he said.

In the 1980s, the local government decided to develop

tourism at the bamboo tree resort of Yibin.

In 2006, he quit his job, returned to the city and opened the restaurant, which seats 200, at the bamboo tree resort.

"My restaurant is one of the favorites at the resort. We sell 2,000 to 3,000 kilograms of preserved pork made with my own recipe every winter," he said.

With the resort attracting more and more tourists, he now earns an annual income of over 200,000 yuan (\$29,169) from the restaurant.

"We still cut the bamboo, but we cut them to help them grow and make our home

green," he said.

With an area of more than 8,667 hectares of bamboo trees, the resort received 1.3 million visitors, bringing in 757 million yuan in total revenue last year.

"We aim to increase bamboo planting by an area of 27,000 hectares and its economic output to 30 billion yuan by 2020," said Lei Jingwei, head of the forestry department of Yibin.

According to Lei, the city now grows 208,000 hectares of bamboo, and apart from tourism, it is also developing bamboo-related industries.

Huang Yuanqiang, who has worked in the construction industry for many years,

invested 40 million yuan and opened a factory producing floorboards in the city's Changning county in 2014.

"Bamboo floorboards can be used for outdoor decking, as bamboo does not rot as easily as wood," he said. It is estimated that the company will have an economic output of 150 million yuan when it reaches full production capacity.

Fans can also be made from bamboo. Panda, a fan-making company in Xingguang village, for instance, has created 200 jobs since it was founded six years ago, most of which have gone to female villagers like Fu Hongmei.

Fu, now a mother of two,

can process nearly 600 fans each day, earning up to 30,000 yuan a year. She said she is satisfied with her job at the village fan-making company. "I can earn some money and enjoy more freedom while taking care of the family," Fu said.

Panda produces about 2 million bamboo fans, which are all sold to Japan, according to Wan Ying, an executive at the company.

The city of Yibin plans to develop bamboo-related industries and foster 20 major bamboo-related businesses by 2020 to create jobs and increase local incomes.

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