India turns to AI as cyber warfare threats grow

January 22 2017, by Megha Bahree

Tech start-up Innefu is developing AI systems for use by Indian intelligence-gathering agencies

In the darkened offices of a tech start-up, a handful of computer engineers sifts through a mountain of intelligence data that would normally be the work of a small army of Indian security agents.

"We use artificial intelligence (AI) to look for patterns in the past to

predict future behaviour," says Tarun Wig as he explains why he hopes his company Innefu can do more business with India's government.

"Cyber warfare isn't a movie, it's happening right now.... We lost out on the industrial revolution, we lost out on the defence revolution—let's not lose out in the cyber revolution."

While other countries have long relied on AI to gather intelligence, India—sometimes seemingly addicted to paperwork—has continued to use agents to eyeball reams of data gathered over the years.

It's a process that sucks up time and can often miss crucial information.

India has been in three wars with its neighbours since independence and the target of numerous cross-border attacks, including in 2008 when Pakistan-based extremists killed more than 160 people in Mumbai.

Now the threat from cyber attacks is growing and its vulnerability has been exposed.

Some 22,000 pages of data related to submarines that a French government-owned company was building for the Indian navy were leaked to the media last year.

Opposition leader Rahul Gandhi's Twitter account was hacked in November while the elite National Security Guard's website was reportedly defaced with profanity-laden messages for Prime Minister Narendra Modi last month.

"Our idea starting out was that if the next war is fought on cyber, we need our own weapons," said Wig as he talks through software developed for India's needs.

Octopus tentacles

Innefu got a foot in the lucrative business of government contracts after resolving a thorny test case for a law enforcement agency that wanted to determine the background to an incident along one of India's borders.

The agency handed over two CDs with about 1,500 intelligence documents, including social media snippets, such as posts on planned protests.

Innefu had to train the machine to read the agency's language, including abbreviations, and then began extracting information on what happened, who were the main players and how they interacted with each other.

Innefu founders Abhishek Sharma (L) and Tarun Wig hope to secure government contracts for their AI-based security threat prediction tool

Its newest offering Prophecy is modelled on products made by Palantir Technologies, a private security firm whose founders include Paypal co-founder Peter Thiel and whose clientele includes the CIA and the FBI.

"Prophecy is like an octopus with multiple tentacles that pulls data from multiple places," said Wig's co-founder Abhishek Sharma.

While the use of AI is commonplace elsewhere in Asia, it is still in its infancy in India.

About 75 percent of respondents to a recent survey by consulting firm EY India said cybersecurity deployed in their organisations does not meet their needs, pointing to big opportunities for companies such as Innefu.

Although Innefu is the only Indian company known to specialise in national security, other Indian companies such as Arya.ai and Haptik are also tapping what should be a lucrative market.

Banks have started to use AI to target products to customers and doctors are using it in a couple of experiments to map a patient's medical history in order to devise new lines of treatment.

Work is also underway to create a system that can act as a backbone for all electronic warfare programmes for the Indian army.

But most of this is still at the laboratory stage, experts say.

AI laggards

"It's expensive and our society is not used to automated decision-making," Jiten Jain, chief of Indian Infosec Consortium, an industry body, told AFP. "We're still used to manual and human decision-

making."

Subimal Bhattacharjee, a cyber security expert, said India had been caught off guard by the need to upscale its use of AI.

"We are definitely laggards in comparison to China and South Korea and the US," he said.

Innefu operates from the eighth floor of a nondescript Delhi commercial complex that houses chartered accountants and eateries. Its windows are darkened with thick black paper, while clusters of wires sprout from walls adorned with photos of goddess Lakshmi, the purveyor of wealth.

But despite its humble surroundings, it is confident an ongoing trial of Prophecy will lead to more business with India's security services—whom Wig expects to be naturally inclined to go local.

"You can't really trust such sensitive data with foreign companies," said Wig.

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