

# Thinking **Outside the Box**

Leveraging the Hong Kong government's strong support for R&D activities, NeuronSpike utilises brain-inspired technology to help companies elevate products for quicker, greener and more dependable results.

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**Dovran Amanov**  
**CEO & Founder**  
**NeuronSpike Technologies**



Inspired by how the human brain works, NeuronSpike Technologies designs artificial intelligence chips to deliver cost-effective and reliable machine learning solutions for technology-driven companies. A joint research effort between Harvard University and Hong Kong University of Science and Technology has brought the company into fruition. Eyeing the enormous business opportunities brought about by the development of the Guangdong-Hong Kong-Macao Greater Bay Area (GBA), the company established its Hong Kong office in 2019.

## Business Made Easy

The Hong Kong NeuronSpike office houses a growing roster of hardware engineers joined recently by sales colleagues. Dovran Amanov, NeuronSpike Technologies' CEO and founder, cites the city's ease of doing business, strong regulatory environment and rule of law as key motivators for setting up in Hong Kong. Yet the biggest incentive for choosing Hong Kong was the government's strong support for technology companies.

“As we are a deep technology research and development (R&D) company, private investors may be reluctant to take risks on us when we first launched,” Amanov noted. “The government's R&D

support boosted us back then. We further benefited from Hong Kong Science and Technology Park's incubation programme. Its Research Talent Hub programme supported our hiring of R&D staff members. We also collaborated with City University of Hong Kong to develop ultra-fast, low memory footprint neuromorphic computer vision systems.” Amanov added that the company's chipset designs for mobile phones, security cameras, self-diving cars and drones offer novel solutions where physical size and battery energy limitations are key constraints.

Amanov feels that Hong Kong's proximity to Asia-Pacific and the Greater China markets allows it to find the best talent and investment opportunities. “Hong Kong serves as an international promotion stage to grasp opportunities arising from the development of the GBA. Currently, our focus is on securing patents that will solidify our GBA entry,” he said.

## Pandemic Shifts and Solutions

Even though the pandemic closed borders and nanotechnology fabrication facilities, NeuronSpike maintained its momentum. “We switched to using field programmable gate arrays to develop our design architecture,” Amanov explained. “We believe this change will be permanent since it is more cost-effective and

convenient than paying nanofabrication facilities service fees. In addition, we are open to hybrid work arrangements and use collaborative software tools extensively to maintain team synergy.”

Amanov believes that the city's dynamism and “work hard, play hard” DNA is what makes it special. “The experience of Hong Kong's vibrancy and multicultural life is enriching and joyful. There are also vast opportunities for technology startups and companies thanks to the government support and collaboration with local universities,” he concluded.

## NeuronSpike Technologies

- The company develops brain-inspired processor chips that are modelled like brains by mirroring neurons and synapses in the chip's architectures
- Its Hong Kong office focuses on research and development, and incubated at Hong Kong Science and Technology Park

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