brainchip

ASX Announcement

BrainChip Granted New Australian Patent

- **Patent AU2022287647 "An Improved Spiking Neural Network" issued to BrainChip.**
- **BrainChip's portfolio now comprises 20 issued patents.**

SYDNEY, Australia – 06 May 2024 – BrainChip Holdings Ltd (ASX: BRN), (OTCQX: BRCHF) ("BrainChip" or "the Company"), the world's first commercial producer of ultra-low power neuromorphic AI IP, today announced that its patent portfolio is further strengthened with the issue of an Australian patent.

Patent AU2022287647 was granted on 04 May 2024 by IP Australia. The patent is considered by the Company to be a valuable IP asset that facilitates low shot learning.

BrainChip's Akida™ IP and MetaTF™ tools seamlessly transforms contemporary neural networks into event-based or spiking networks. This patented technology uniquely synergizes with the converted spiking networks, enabling the streamlined deployment of edge learning algorithms and unlocking use cases that conventional AI tools or solutions cannot attain.

Key features of patent:

The claimed invention facilitates one/low shot learning, meaning already learned higher end features can be utilised when learning a new class with one or only few (e.g. 1…5) samples of information in a supervised or semi-supervised way while retaining other neuron/classes.

Learning is performed by adding neurons to the final layer of a previously trained network to represent a new class, with the neural network weights of the added neuron being trained with only a few samples while the remainder of the network remains unchanged.

Example applications:

- Biometric face recognition (adding a new person's face as a new class without retraining the entire model);
- Speech recognition (adding new spoken words or commands to a pre-trained model without retraining the entire system); and
- Anomaly Detection in Industrial Systems - add a new class representing e.g. a site-specific anomaly without retraining the entire dataset.

Brainchip CEO Sean Hehir said, "This patent confirms our leadership in the field of one/low shot learning as an alternative to traditional machine learning processes, which are by contrast extremely inefficient, expensive and energy intensive.

This patent illustrates why our neuromorphic technology is perfect for Edge AI applications where one/low shot learning, ultra-low power consumption and efficiency are key differentiators for customers seeking competitive advantages."

BrainChip's portfolio now comprises 20 issued patents (13x US, 5x AU, 2x CN). In addition, there are 23 pending patent applications across the US, Europe, Australia, Canada, Japan, Korea, India and Israel.

This announcement is authorised for release by the BRN Board of Directors.

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About BrainChip Holdings Ltd (ASX: BRN)

BrainChip is the worldwide leader in edge AI on-chip processing and learning. The Company's first-to-market neuromorphic processor, Akida^{TM}, mimics the human brain to analyze only essential sensor inputs at the point of acquisition, processing data with unparalleled efficiency, precision, and economy of energy. Keeping machine learning local to the chip, independent of the cloud, also dramatically reduces latency while improving privacy and data security. In enabling effective edge compute to be universally deployable across real world applications such as connected cars, consumer electronics, and industrial IoT, BrainChip is proving that on-chip AI, close to the sensor, is the future for its customers' products as well as the planet. Explore the benefits of Essential AI at www.brainchip.com.
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Additional information is available at:
https://www.brainchipinc.com
Investor Relations Contact: IR@brainchip.com

Follow BrainChip on Twitter: https://www.twitter.com/BrainChip_inc
Follow BrainChip on LinkedIn: https://www.linkedin.com/company/7792006

Company contact:
Tony Dawe
IR@brainchip.com