

Demo Title: On-Chip Learning with Akida

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This demonstration will show how Akida™, a complete neural processor from BrainChip Inc., can perform various types of learning at the edge in real-time. As a high-performance and ultra-power neural processor including incremental and few shot learning capabilities, Akida is an ideal solution for Edge and IoT applications.

Utilizing a Dynamic Vision Sensor Camera and the Akida simulation environment, the demonstration will show a Neural network both running inference on hand gestures as well as being trained on new hand gestures, in real time. The Neural network running on the Akida simulator is composed of two convolutional layers capable of storing pre-trained weights as well as updating weights real time using an algorithm based upon STDP.

During the demo, the SNN will be trained live on hand gestures from users located in front of the DVS camera. The user will be able to train the SNN to learn five different hand gestures that will be learned in seconds and will be immediately recognized.