

Hardware Accelerator for Deep Learning

Track Code: 2017-CULU-67658

Categories:

- Computer Technology
- Electrical Engineering

Keywords:

- Computer Hardware
- Computer Programming
- Computer Technology

Deep neural networks are mathematical models designed to perform classification and localization of objects within images and videos. They are also used for speech recognition, generating text from images and several other computer vision applications. These models are computationally very expensive and generally require the use of hardware that is extremely energy intensive.

Researchers at Purdue University have designed a hardware accelerator for deep learning along with code written to implement it. The technology described, when implemented on field programmable gate array devices, is designed provides performance while requiring a fracture of the energy.

Advantages:

- Power efficient
- Improves computational efficiency

Potential Applications:

- Neural Networks
- Speech Recognition\

People:

- Culurciello, Eugenio (Project leader)
- Chang, Andre
- Gokhale, Vinayak Anand
- Zaidy, Aliasger

Intellectual Property:

Application Date: May 25, 2018

Type: Utility Patent
Country of Filing: United States
Patent Number: (None)
Issue Date: (None)

Application Date: May 26, 2017
Type: Provisional-Patent
Country of Filing: United States
Patent Number: (None)
Issue Date: (None)

Contact OTC:

Purdue Office of Technology Commercialization
1801 Newman Road
West Lafayette, IN 47906

Phone: (765) 588-3475
Fax: (765) 463-3486
Email: otcip@prf.org