**DNNWEAVER v2.0: From Tensors to FPGAs**

Open-Source Specialized Compute Stack for Deep Learning on FPGAs

Open Hardware Acceleration Initiative (OHAI)

dnnweaver.org

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**Compiler**

High-level DNN specification in Caffe

**OHAI Abstraction Layer**

DNNWEAVER ISA

**Design Planner**

Hardware

Flexible # PEs

Schedule

Co-optimize Hardware and Execution Schedule

Slices are scheduled onto PUs

**Scheduler**

Generates Memory Interface

Static Data Marshalling

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**DNNWEAVER Bridges the Semantic Gap**

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**Graphical Diagrams**

- High-level DNN Model
- Compiler
- OHAI Abstraction
- Design Planner
- Design Weaver
- Scheduler
- Memory Interface

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**Graphs and Tables**

- Speedup / ARM A15 vs Power (Watt)

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