

Energy-Efficient Mapping of Emerging Machine Learning Models on A Multi-Core Processing Platform

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Who am I

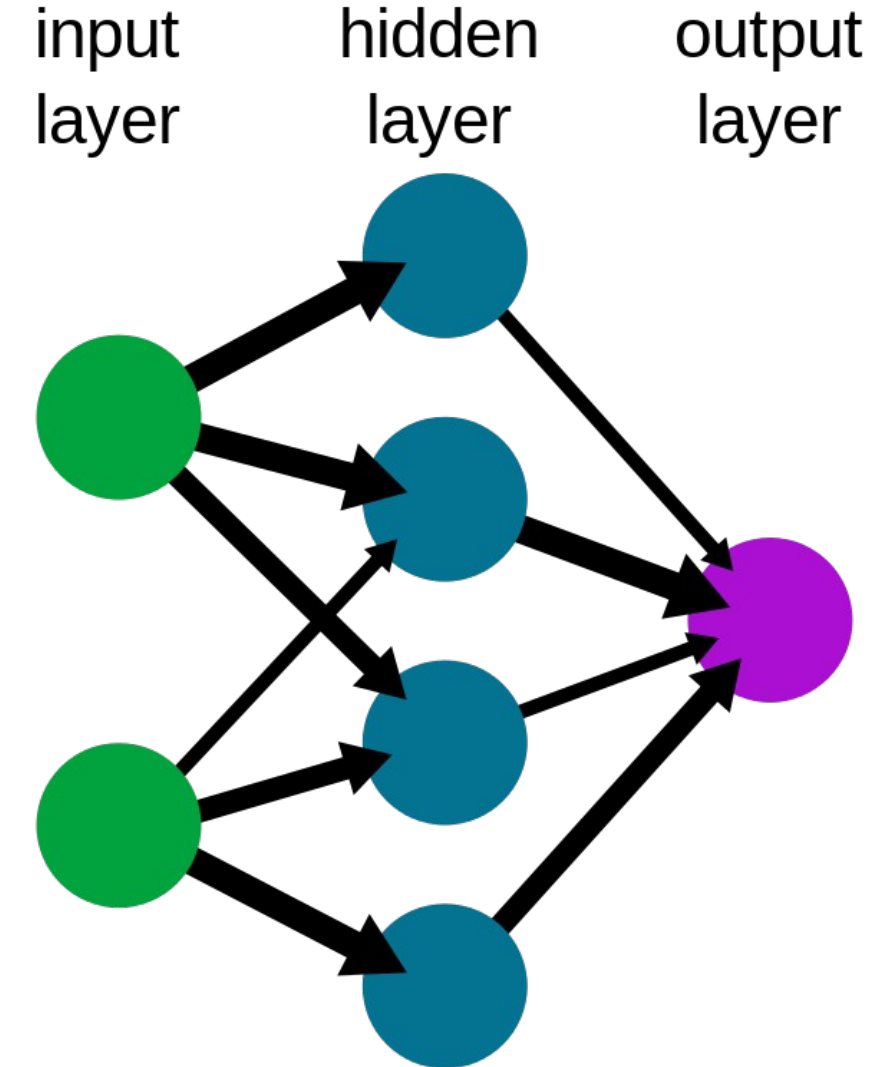
- Study computer science at University of Massachusetts Lowell
- Host university: KU Leuven
- Future Plans: work as a programmer
- Interests: skiing, travel, video games



Neural Network

- Has one input and output layer, and several hidden layers
- Nodes from each layer are connected to every node in the next layer
- Every node and connection has a “weight” assigned to it
- Training decides values of weights

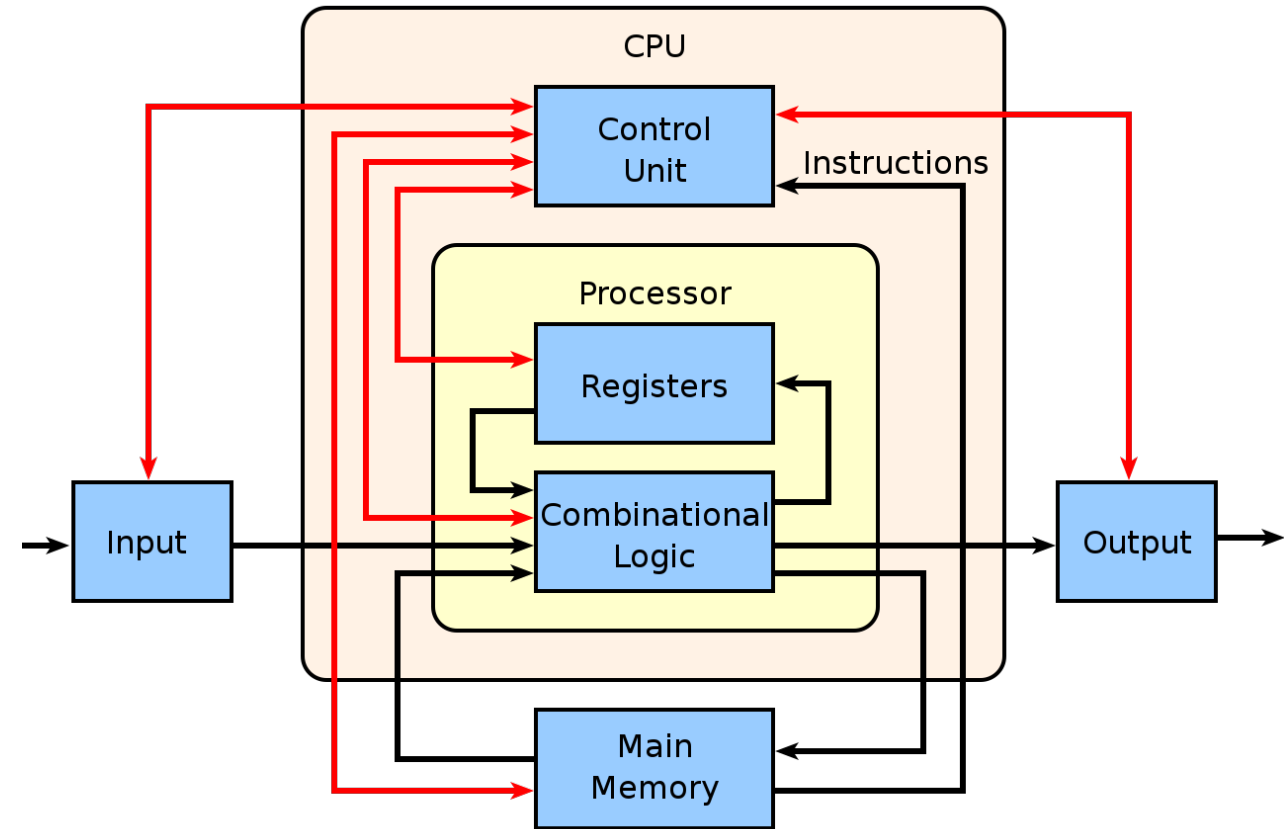
A simple neural network



https://commons.wikimedia.org/wiki/File:Neural_network_example.svg

Basic Computer Chip

- Registers contain numbers chip does operations with
- Stored as a string of 1s and 0s (high and low voltage)



<https://commons.wikimedia.org/wiki/File:ABasicComputer.svg>

New Computer Chip

- Has several interconnected cores which can see each others' registers, speeding up much of the calculations
- Chip has to be simulated before it can be produced

Thank You!

Questions?