

Review

- WTF is deep learning? ($\times 2$)
- Supervised, reinforcement, unsupervised
- Supervised = regression, classification ($\times 3$)
- Labels are expensive ($\times 3$)

Deep nets

- Architectures
- Applications
- Data sets ($\times 2$)
- Hardware ($\times 5$)
- Brains ($\times 2$)
- Neurons ($\times 3$ each)
 - linear
 - binary threshold
 - rectified linear
 - sigmoid
 - stochastic binary

Example: handwriting ($\times 6$)

Architectures ($\times 10$)

History ($\times 4$)

Perceptron ($\times 5$)

Progress ($\times 5$)

Hinton ($\times 5$)

2011 (before, then since)

Basic ideas ($\times 3$)