

Neural Networks

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Perceptron

- Linear classifier
- Exercise: program Perceptron in Python

Neural Network

- Non-linear classifier
 - Can also be used for regression
- Define its structure
 - Feed-forward
 - Single Layer
 - Multiple Layers
 - Recurrent

How weights are learned?

- Genetic Algorithms
 - Selection
 - Mutations
 - Combinations
 - <http://www.ai-junkie.com/ann/evolved/nnt5.html>
- Back-propagation algorithm
 - Derive its equations

Matlab

- Try Matlab NeuralNet toolbox
 - See tutorial online