

A Single Neuron

Outline

- A quick tour of machine learning
- A description of linear regression
- A description of classification
- Description of a **single neuron**

A Quick Tour of Machine Learning

[Machine learning – Wikipedia](https://en.wikipedia.org/wiki/Machine_learning)

https://en.wikipedia.org/wiki/Machine_learning

<https://blinpete.github.io/wiki-graph/?lang=en&wordle&query=Machine%20learning>

Linear Regression (Scalar Output)

Linear Regression - MIT Mathlets
(<https://mathlets.org/mathlets/linear-regression/>)

Classification

A Neural Network Playground
(<https://playground.tensorflow.org>)

A Single Neuron

- AKA perceptron or logistic-regression (more or less)
- What would you all like to use as an example?

What do we optimize?

Gradient Descent