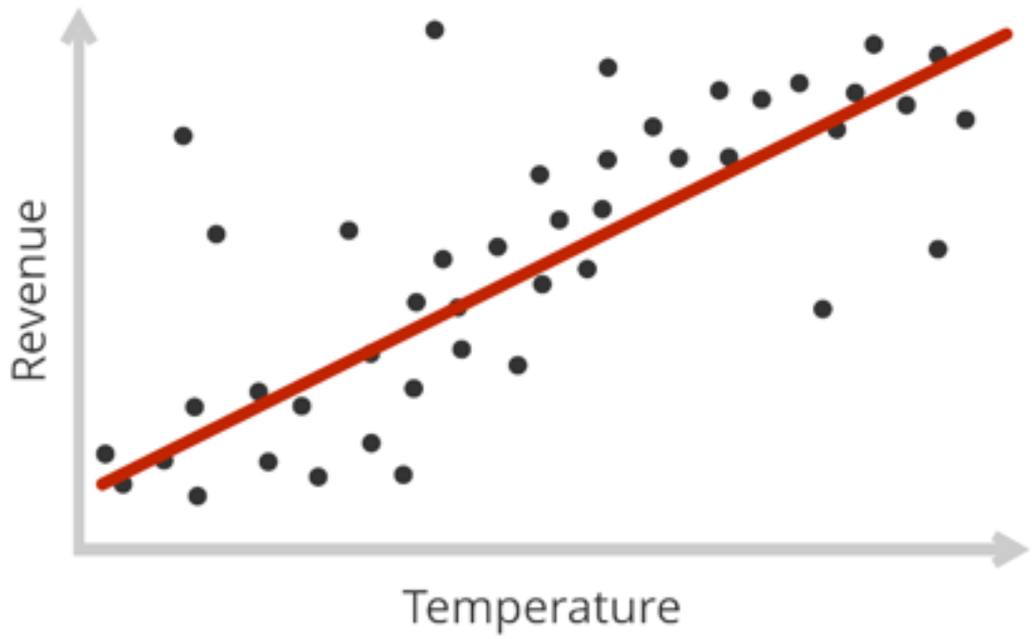
Neural Nets

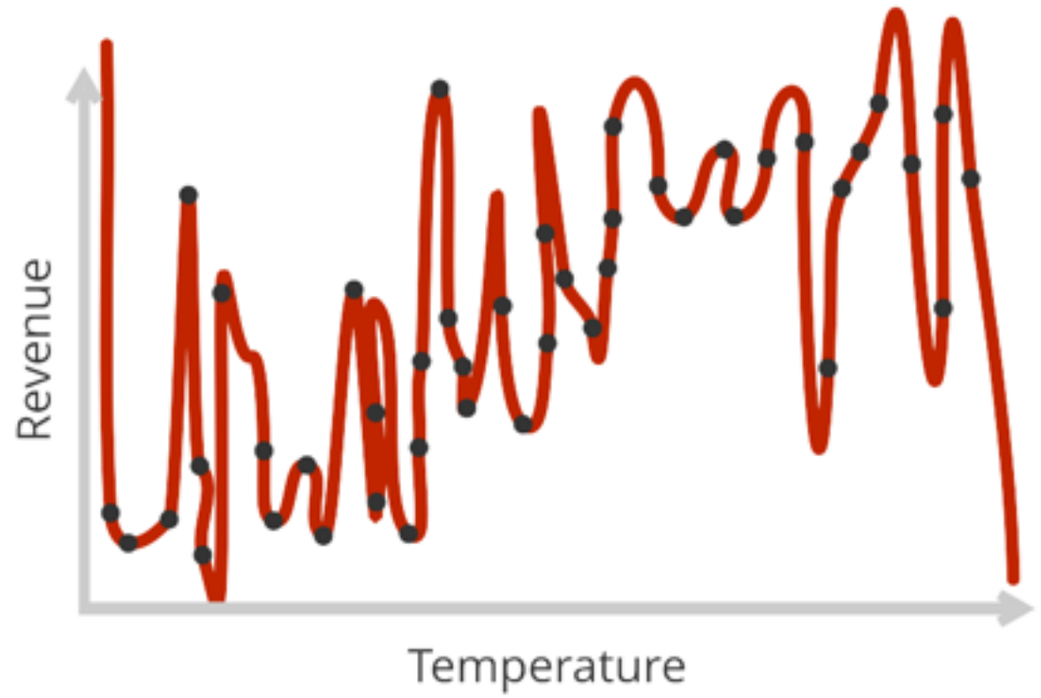
A Very Quick Introduction

@benfreu
Ben Freundorfer

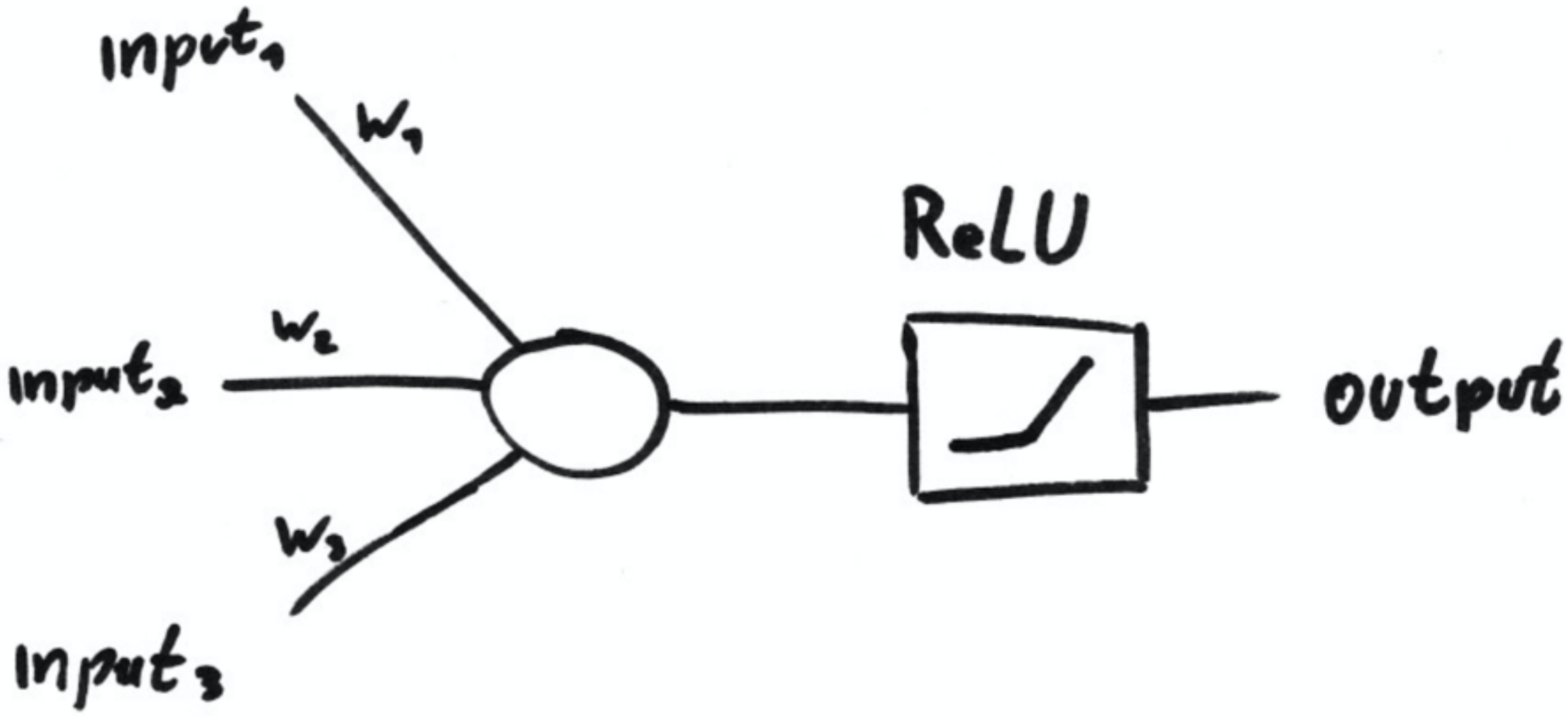
Underfitting



Overfitting

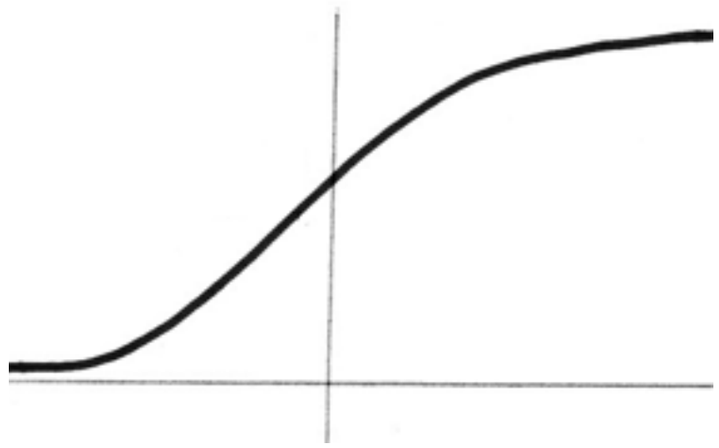


Single Neuron

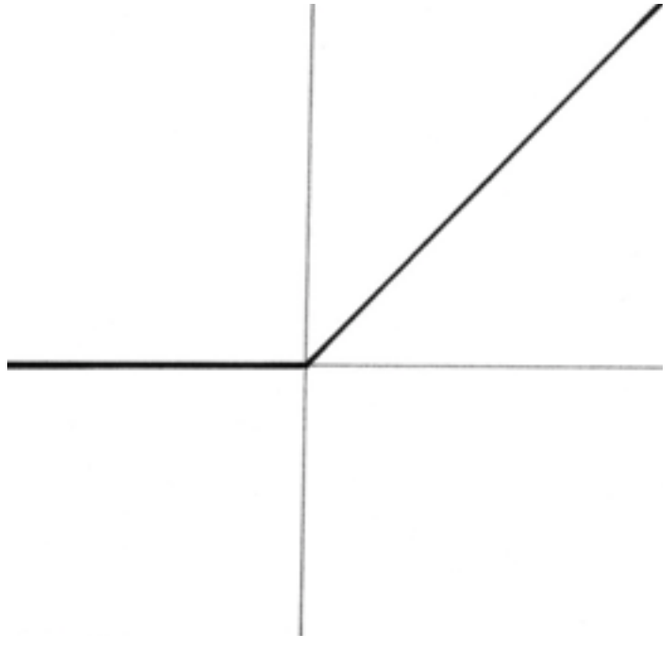


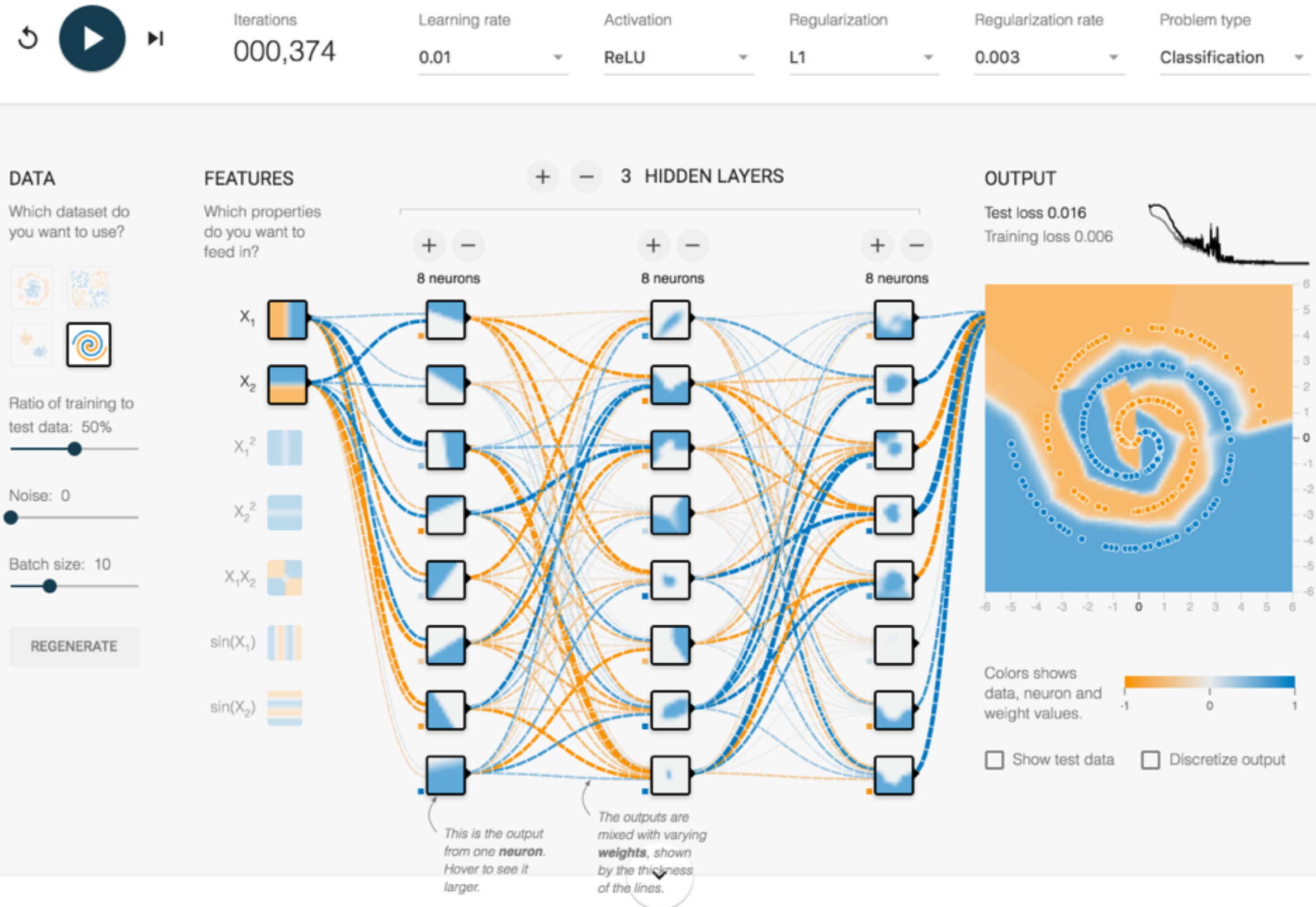
Activation Functions

- Sigmoid



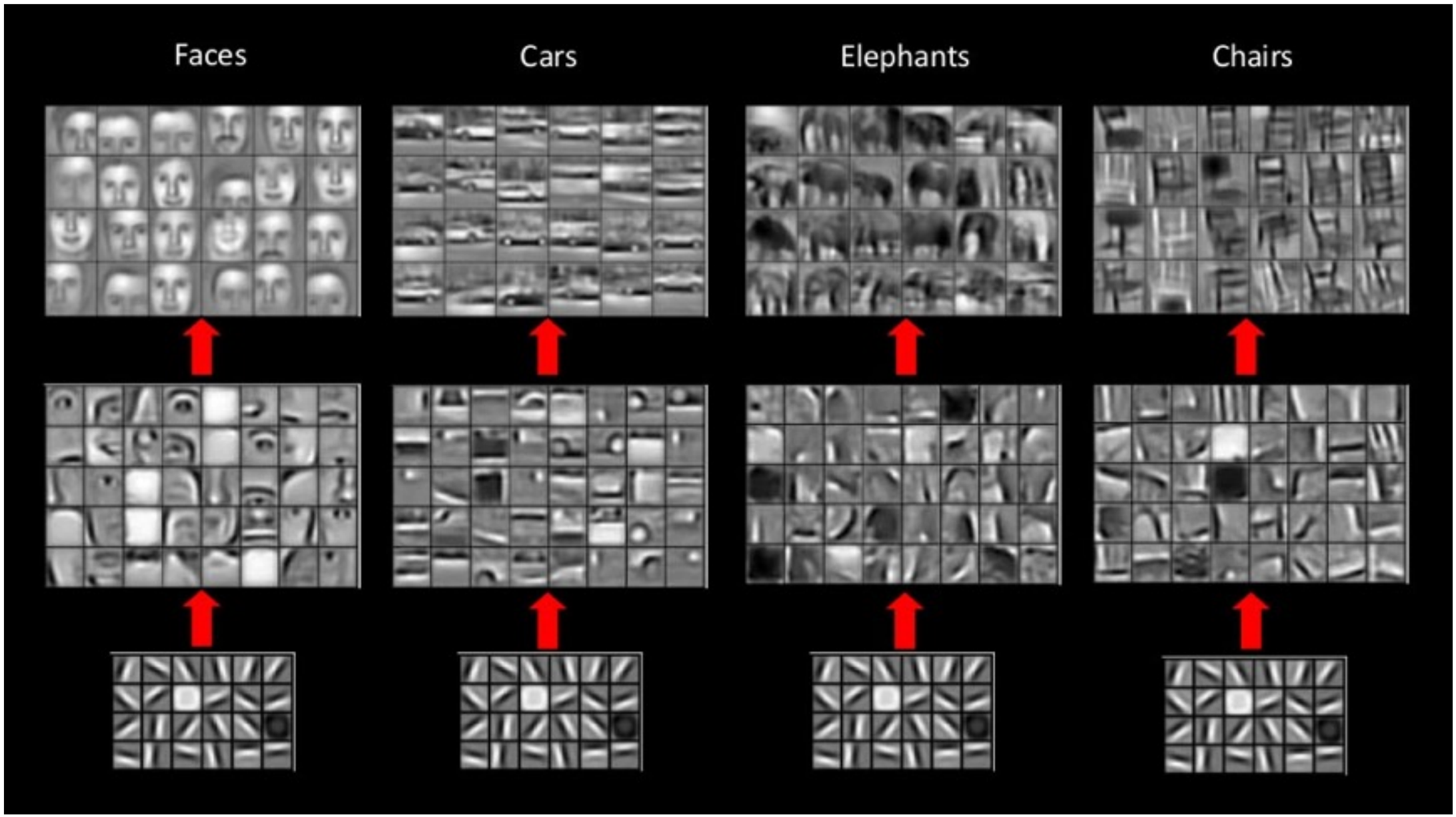
- ReLU





http://playground.tensorflow.org/

Layers of Abstraction



Challenges

- Overfitting
- Understanding the net's internals

CC AT 4.0 Google Inc. https://research.googleblog.com/2015/06/inceptionism-going-deeper-into-neural.html

Architectures

- Feedforward NN
- Convolutional NN
- Recurrent NN
- AutoEncoder

Thank you

Ben Freundorfer
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Ethics

- Your model might turn into a racially profiling sexist.
- Be aware of what your input features mean & what you actually base your predictions on
- Relatively harmless when predicting product categories - questionable for credit ratings