# OVERVIEW

**Deep Learning Pre-Work** 

This file is meant for personal use by brentjones@gmail.com only.

Sharing or publishing the contents in part or full is liable for legal action.

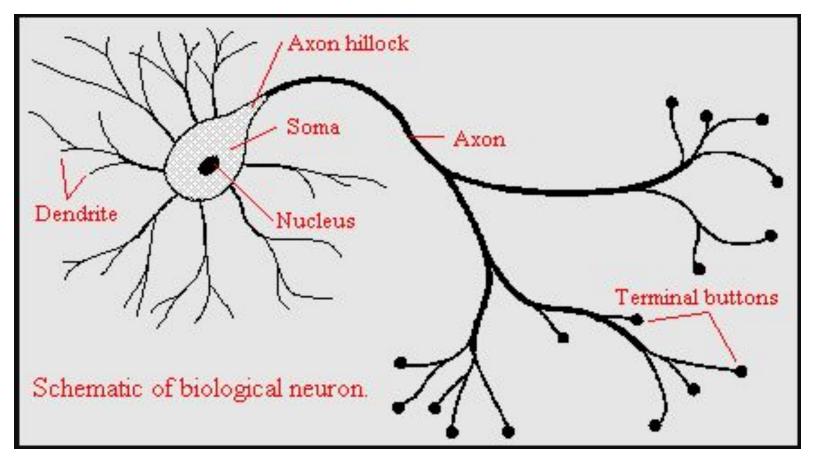


### **Agenda**

- Introduction
- Use Cases
- Pre-work Overview

#### The Biological Neuron





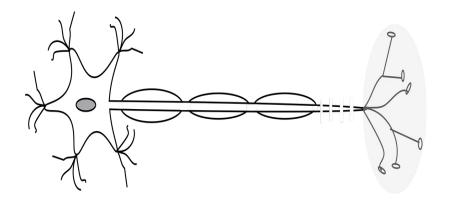
#### The Human Brain

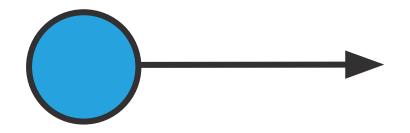




#### **Biological vs Artificial Neurons**

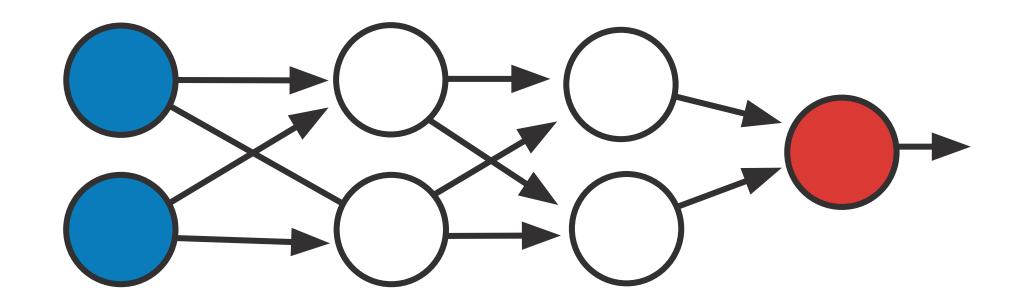






#### **Deep Learning**







# Use Cases

#### Sephora



## SEPHORA



#### Google DeepMind



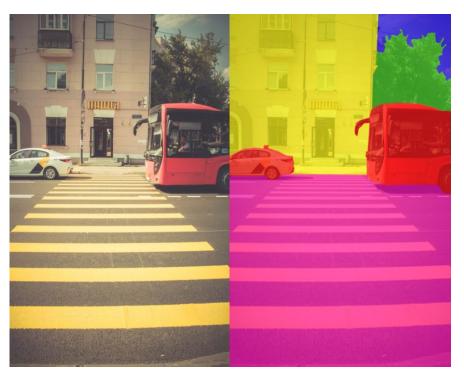




#### **Tesla**



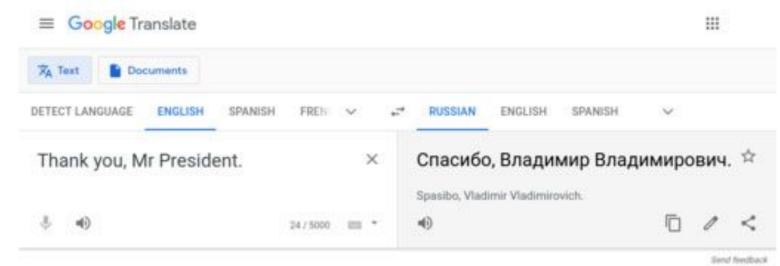




#### **Google Translate**





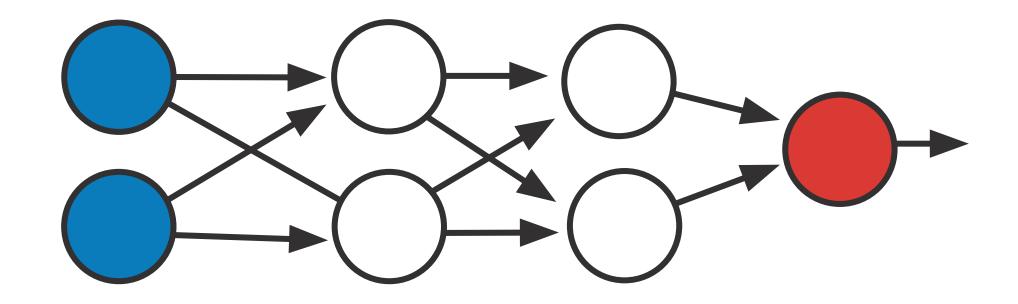




## Pre-work Overview

#### **Neurons and Layers**



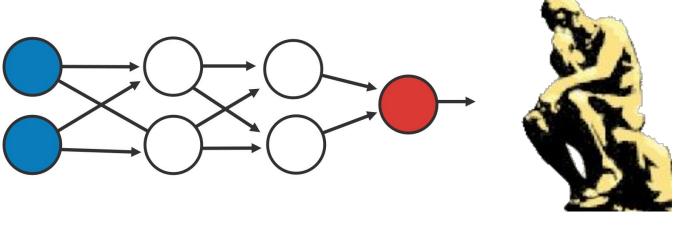




#### **Machine Learning**

# $\begin{array}{c} \sum_{i=1}^{n} \left[ \frac{x_{i+1}}{n} \right] \left[ x_{n} \right] \subset R \\ y_{n} = \sum_{i=1}^{n} \left[ \frac{x_{n}}{n} \right] \left[ \frac{x$

#### **Hyperparameter Selection**



Source: Wikimedia Commons

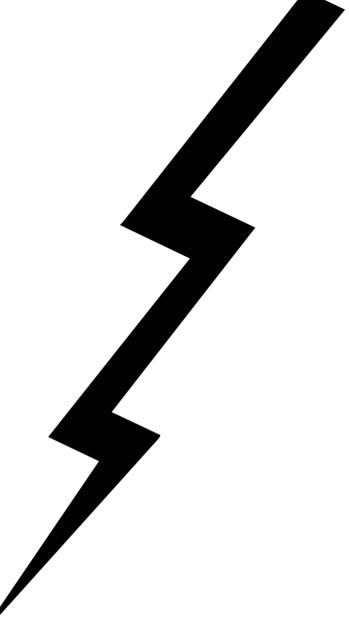
Source: Wikimedia Commons

What part of the architecture machine learning learns, and what hyperparameters can be controlled



## Math





## Code



Source: Wikimedia Commons

This file is meant for personal use by brentjones@gmail.com only.

Proprietary content. @ Great learning. All Rights Reserved. Unduring the or distribution prohibited.