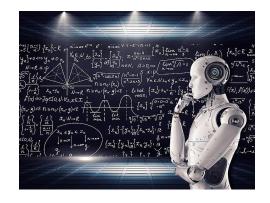
# Hyperparameter Selection

**Deep Learning Pre-Work** 

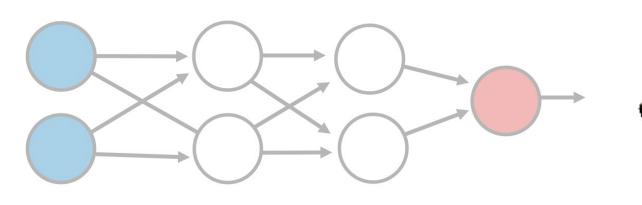


# Machine Learning



Source: Wikimedia Commons

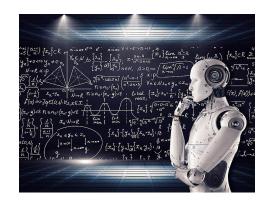
# Hyperparameter Selection



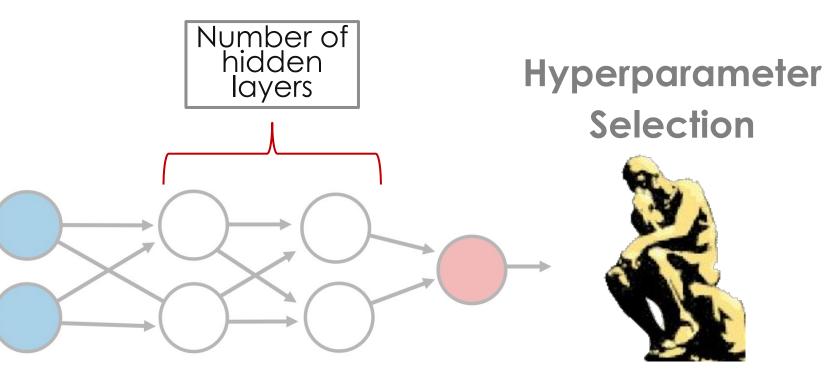
Source: Wikimedia Commons



# Machine Learning

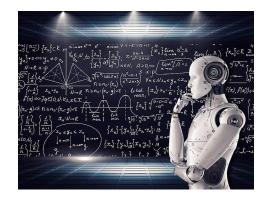


**Source: Wikimedia Commons** 



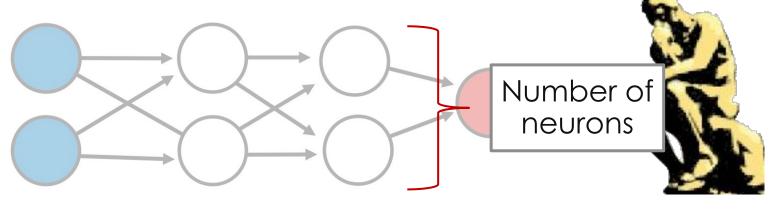


# Machine Learning



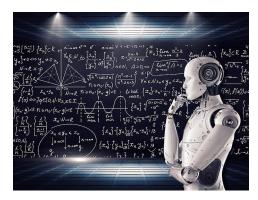
Source: Wikimedia Commons

# Hyperparameter Selection

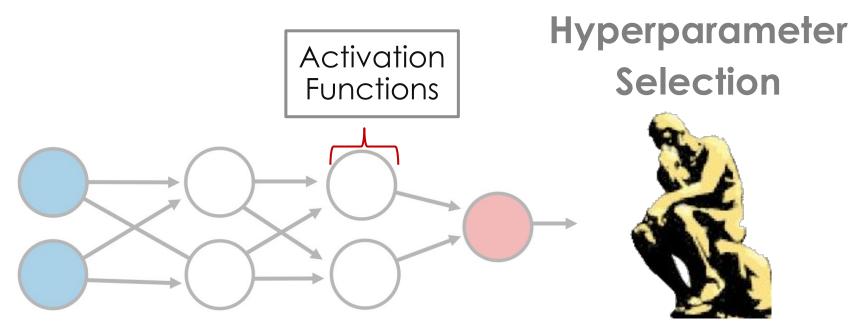




# Machine Learning

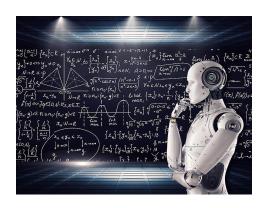


Source: Wikimedia Commons

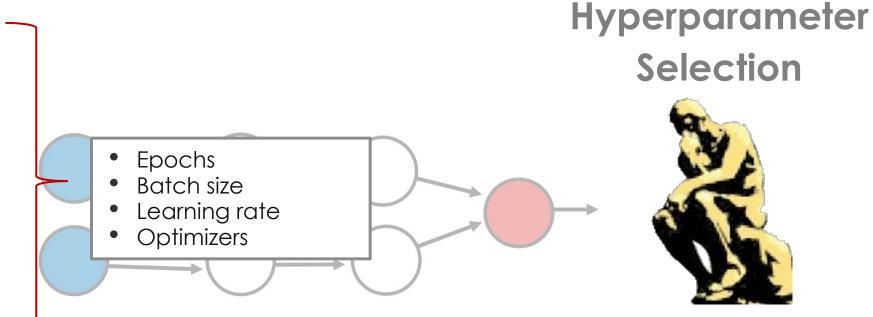




# Machine Learning

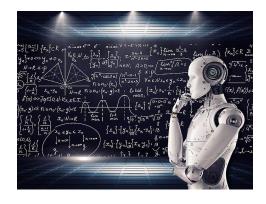


**Source: Wikimedia Commons** 





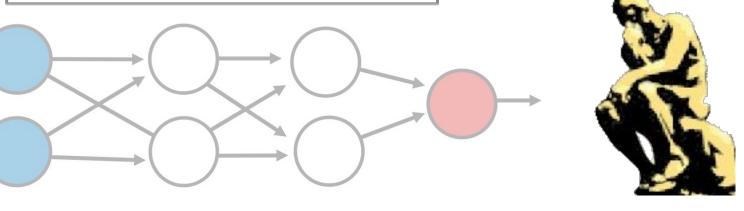
# Machine Learning



Source: Wikimedia Commons

- Dropout rate
- Regularization
- Normalization Technique
- ...and more

# Hyperparameter Selection



#### Tips and Strategies



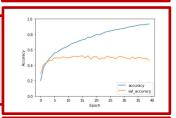
1) Don't reinvent the wheel



2) Start small and iterate



3) Look at loss plots



4) Tune hyperparameters



5) Don't worry about perfection



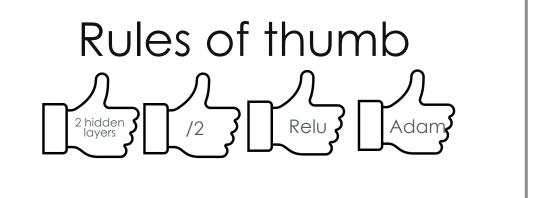
### 1. Don't reinvent the wheel





Previous projects





Google Search

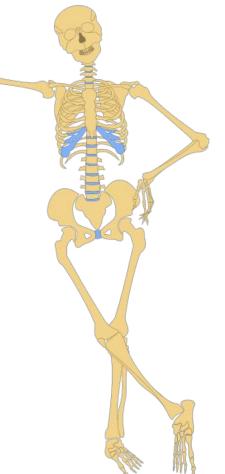
Google Search

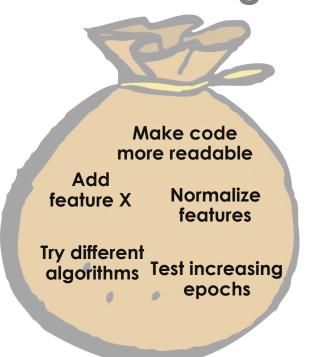
# 2. Start small and iterate

Great Learning

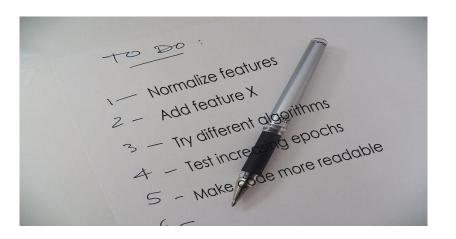
1. Build the skeleton

2. Collect ideas for enhancing



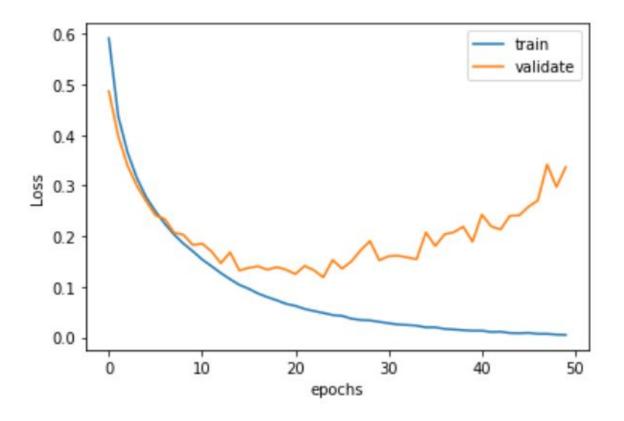


# 3. Implement one at a time until the deadline



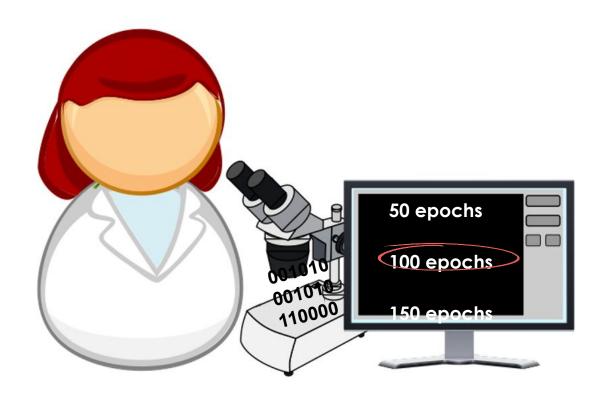
### 3. Look at loss plots





## 4. Tune hyperparameters





#### 5. Don't worry about perfection



