# Improving NN Performance

#### 1. Vanishing Gradients

- a. Activation Function
- b. Weight Intilisation

#### 2. Overfitting

- a. Reduce complexity/ Increase data
- b. Dropout Layer
- c. Regularization( L1 & L2)
- d. Early Stopping

#### 3. Normalization

- a. Normalization Inputs
- b. Batch Normalization
- c. Normalizing Activations

## 4. Gradient Checking and Clipping

#### 5. Optimizers

- a. Momentum
- b. Adagrad
- c. RMSprop
- d. Adam

### 6. Learning Rate Scheduling

# 7. Hyperparamater Tuning

- a. No of hidden layers
- b. Nodes/ Layers
- c. Batch Size