

# Improving Neural Network Performance

## 1. Overfitting

- Dropout Layers
- Regularization (L1 & L2)
- Early Stopping

## 2. Normalization

- Normalizing inputs
- Batch Normalization
- Normalizing Activations

## 3. Vanishing Gradients

- Activation Functions
- Weight Initializations

## 4. Gradient Checking & Clipping

## 5. Optimizers

- Momentum
- Adagrad
- RMSprop
- Adam

## 6. Learning Rate Scheduling

## 7. Hyperparameter Tuning

- No of hidden layers
- Nodes in a layer
- Batch Size
- Epochs