

# DEEP LEARNING TUTORIAL

Follow these steps to get acquainted with deep learning theory as well as practical implementation.

- **Coursework for Deep Learning** : This is one of the famous websites to learn deep learning and terminologies. A highly recommended tutorial to get started.
- **Understand standard terminologies** : Keras is a popular deep learning library and now growing at a rapid speed. Official website has sufficient documentation to understand how to write following layers.
  - Fully connected / Dense Layers
  - Convolution Layer
  - Activations
  - Batch Normalization
  - Dropout
  - Optimizers: SGD(Stochastic Gradient Descent)
  - Losses
  - Evaluation metrics: Accuracy, precision, recall, f-measure.
- Once you have basic understanding of layers, follow these codes to write your own neural net and train on popular MNIST dataset.
  - **Implement a Dense layer only network for mnist digit classification.**
  - **Define a model using Sequential Technique.**
  - **Implement a Convolutional neural net for mnist digit classification.**
- Learn general image classification and understand training by plotting using tensorboard.
  - **Keras tutorial on image classification**
  - **Plotting training information using tensorboard**