# Deep Learning Foundation

**Instructors:**

**krish naik:**

Having 10+ years of experience in Data Science and Analytics with product architecture design and delivery. Worked in various product and service based Company. Having an experience of 5+ years in educating people and helping them to make a career transition.

**Curriculum:**

**Complete Road Map To Prepare For Deep Learning**

• Roadmap Preview

**Tutorial 1- Introduction to Neural Network and Deep Learning**

**Tutorial 2- How does Neural Network Work**

**Tutorial 3-Activation Functions Part-1**

**Tutorial 4: How to train Neural Network with BackPropogation**

**Tutorial 5- How to train MultiLayer Neural Network and Gradient Descent**

**Tutorial 6-Chain Rule of Differentiation with BackPropagation**

**Tutorial 7- Vanishing Gradient Problem**

**Tutorial 8- Exploding Gradient Problem in Neural Network**

**Tutorial 9- Drop Out Layers in Multi Neural Network**

**Tutorial 10- Activation Functions Rectified Linear Unit(relu) and Leaky Relu Part 2**

**Deep Learning-Activation Functions-Elu, PRelu,Softmax,Swish And Softplus**

**Tutorial 11- Various Weight Initialization Techniques in Neural Network**

**Tutorial 12- Stochastic Gradient Descent vs Gradient Descent**

**Tutorial 13- Global Minima and Local Minima in Depth Understanding**

**Tutorial 14- Stochastic Gradient Descent with Momentum**

**Tutorial 15- Adagrad Optimizers in Neural Network**

**Tutorial 16- AdaDelta and RMSprop optimizer**

**Deep Learning-All Optimizers In One Video-SGD with Momentum,Adagrad,Adadelta,RMSprop,Adam Optimizers**

**Tutorial 17- Create Artificial Neural Network using Weight Initialization Tricks**

**Keras Tuner Hyperparameter Tuning-How To Select Hidden Layers And Number of Hidden Neurons In ANN**

**Tutorial 18- Hyper parameter Tuning To Decide Number of Hidden Layers in Neural Network**

**Tutorial 19- Training Artificial Neural Network using Google Colab GPU**

**Tutorial 20- Convolution Neural Network vs Human Brain**

**Tutorial 21- What is Convolution operation in CNN?**

**Tutorial 22- Padding in Convolutional Neural Network**

**Tutorial 23- Operation Of CNN(CNN vs ANN)**

**Tutorial 24- Max Pooling Layer In CNN**

**Tutorial 25- Data Augmentation In CNN-Deep Learning**

**Tutorial 26- Create Image Dataset using Data Augmentation using Keras-Deep Learning-Data Science**

**Tutorial 27- Create CNN Model and Optimize using Keras Tuner- Deep Learning**

**Tutorial 28- Create CNN Model Using Transfer Learning using Vgg 16, Resnet**

**Tutorial 29- Why Use Recurrent Neural Network and Its Application**

**Tutorial 30- Recurrent Neural Network Forward Propogation With Time**

**Tutorial 31- Back Propagation In Recurrent Neural Network**

**Tutorial 32- Problems In Simple Recurrent Neural Network**

**Tutorial 33- Installing Cuda Toolkit And cuDNN For Deep Learning**

**Tutorial 34- LSTM Recurrent Neural Network In Depth Intuition**

**Word Embedding - Natural Language Processing| Deep Learning**

**Implementing Word Embedding Using Keras- NLP | Deep Learning**

**Develop your Neural Network Like A Google Deep Learning Developer**

**Kaggle Faker News Classifier Using LSTM- Deep LEarning| Natural Language Processing**

**Stock Price Prediction And Forecasting Using Stacked LSTM- Deep Learning**

**Bidirectional RNN Indepth Intuition- Deep Learning Tutorial**

**Implement Kaggle Fake News Classifier Using Bidirectional LSTM RNN**

**Sequence To Sequence Learning With Neural Networks| Encoder And Decoder In-depth Intuition**

**Develop Your First Deep Learning End To End Project As A Beginner In Data Science in 30 minutes**

**Encoder And Decoder- Neural Machine Learning Language Translation Tutorial With Keras- Deep Learning**

**Problems With Encoders And Decoders- Indepth Intuition**

**Live Session- Understanding Attention Models Architecture And Maths Intuition- Deep Learning**

**Live Session- Encoder Decoder,Attention Models, Transformers, Bert Part 1**

**Live- Attention Models, Transformers And Bert In depth Intuition Deep Learning- Part 2**

**Live -Transformers Indepth Architecture Understanding- Attention Is All You Need**

**How To Train Deep Learning Models In Google Colab- Must For Everyone**

**Alexnet Architecture In-depth-Discussion Along With Code-Deep Learning Advanced CNN**

**VGGNET Architecture In-depth Discussion Along With Code -Deep Learning Advanced CNN**

**Hummingbird-Run Traditional Machine Learning model on Deep Neural Network frameworks-Data Science**

**Lets Implement LSTM RNN Models For Univariate Time Series Forecasting- Deep Learning**

**TensorDash- How To Monitor Your Deep Learning Model Metrics, Loss, Accuracy Using Mobile App**

**Handling Imbalanced Dataset Using Cost Sensitive Neural Networks- Credit Card Fraud Detection**

**500+ Machine Learning And Deep Learning Projects All At One Place**

**Google Colab Pro Vs Colab Free- Benefits Of Using Colab Pro- How To Access From India**