



Become a Professional in Deep Learning & Neural Networks

In 6 Weeks

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LN AI Academy is dedicated to providing industry-focused training that helps students build real skills for real jobs in Data Science, AI, Machine Learning, and modern development tools.

Our mission is to make high-quality tech education accessible for everyone. With expert mentors, practical projects, and job-oriented modules, we help learners build the confidence and expertise needed to grow in the IT industry. Whether you're starting from scratch or upgrading your skills, LN AI Academy ensures you gain the knowledge required to succeed.



10K+ Student Trained	250+ Real-World Projects	100% Placement Assistant
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Introduction To Artificial Neural Network

- What is Artificial Neural Network (ANN)?
- How Neural Network Works?
- Perceptron
- Multilayer Perceptron
- Feed Forward
- Back propagation

Introduction To Deep Learning

- What is Deep Learning?
- Deep Learning Packages
- Deep Learning Applications
- Building Deep Learning Environment
 - Installing Tensor Flow Locally
 - Understanding Google Colab

Tensor Flow Basics

- What is Tensorflow?
- Variables, Constants
- Scalar, Vector, Matrix
- Operations using tensorflow
- Difference between tensorflow and numpy operations

Optimizers

- What does optimizers do?
- Gradient Descent (full batch and min batch)
- Stochastic Gradient Descent
- Learning rate,epoch

Activation Functions

- What does Activation Functions do?
- Sigmoid Function,
- Hyperbolic Tangent Function (tanh)
- ReLU –Rectified Linear Unit
- Softmax Function
- Vanishing Gradient Problem

Building Artificial Neural Network

- Using scikit implementation
- Using Tensorflow
- Understanding MNIST Dataset
- Initializing weights and biases
- Gradient Tape
- Defining loss/cost Function
- Train the Neural Network
- Minimizing the loss by adjusting weights and biases

Modern Deep Learning Optimizers and Regularization

- SGD with Momentum
- RMSprop
- AdaGrad

- Adam
- Dropout Layers and Regularization
- Batch Normalization

Building Deep Neural Network Using Keras

- What is Keras?
- Keras Sequential Model and Functional API
- Solve a Linear Regression and Classification Problem with Example
- Saving and Loading a Keras Model

Convolutional Neural Networks (CNNs)

- Introduction to CNN
- CNN Architecture
- Convolutional Operations
- Pooling, Stride and Padding Operations
- Data Augmentation
- Building, Training and Evaluating First CNN Model
- Model Performance Optimization
- Auto encoders for CNN
- Transfer Learning and Object Detection Using Pre-trained CNN Models
 - LeNet
 - AlexNet
 - VGG16
 - ResNet50
 - Yolo algorithm

Word Embedding

- What is Word Embedding?
- Word2Vec Embedding
 - CBOW
 - skipgram
- Keras Embedding Layers
- Visualize Word Embedding
- Google Word2Vec Embedding
- GloVe Embedding.

Recurrent Neural Networks (RNNs)

- Introduction to RNN
- RNN Architecture
- Types of RNN
- Implementing basic RNN in tensorflow
- Need for LSTM and GRU
- Deep RNN/LSTM/GRU
- Text Classification Using LSTM
- Prediction for Time Series problem
- Bidirectional RNN/LSTM
- Seq-2-Seq Modeling
- Encoder-Decoder Model
- Attention Mechanism

Speech Recognition APIs

- Text To Speech
- Speech To Text
- Automate task using voice
- Voice Search on Web



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