



Deep Learning (Data Science) Training Curriculum

STRUCTURE



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“Become a Professional in Deep Learning by joining our comprehensive Training Program at Croma Campus”

About Croma Campus:

Croma Campus Training & Development Private Limited is an education platform since 2010 providing rigorous industry-relevant programs designed and delivered in collaboration with world-class faculty and industry.

- Hands-On Live Projects
- Simulation Test Papers
- Industry Cases Studies
- 61,640+ Satisfied Learners
- 140+ Training Courses
- 100% Certification Passing Rate
- Live Instructor Classroom / Online Training
- 100% Placement Assistance

Course Objectives:

- The objective of this Course is to deliver all essential skills that can make you future-ready.
- Prepare you for the related data science certification and clear the exam in the first attempt mostly.
- Gain all Deep Learning skills from an initial level to the complex stage where you will find yourself more competent and confident as a Deep Learning expert.
- Learn the right set of tools, techniques, visualization methods, programming languages, AI, ML, algorithm designing, and other similar skills that will make your resume outshine the crowd.
- In the end, gain all soft skills, intellectual skills, and communication skills to apply for various jobs and get hired quickly.

Croma Campus Training Program Deliverables:

- **Session Recordings** - Original Class Room Voice & Video Recording
- **Training Material** - Soft Copy Handbooks
- **Assignments** | Multiple Hands-on Exercises
- **Test Papers** - We provide **Practice Test** as part of our course to help you prepare for the actual certification exam.
- **Live Case Studies**
- **Live Projects** - Hands-on exercises and Project work. You will work on real time industry-oriented projects and assignments for each module to practice.
- **Key focus on Hands-on exercises and Project work.** You will work on real time industry-oriented projects.
- Faculty with more than **10+ Years of Experience** in the Industry.
- **Technical Resume Designing & Job Assistance:** With more than 100+ Clients across the Globe and we help learners to get a good job in their respective field. We also help learners with resume preparation.

Deep Learning (Data Science) Course Content:

- **Introduction to Deep Learning**
 - What are the Limitations of Machine Learning?
 - What is Deep Learning?
 - Advantage of Deep Learning over Machine learning
 - Reasons to go for Deep Learning
 - Real-Life use cases of Deep Learning

- **Deep Learning Networks**
 - What is Deep Learning Networks?
 - Why Deep Learning Networks?
 - How Deep Learning Works?
 - Feature Extraction
 - Working of Deep Network
 - Training using Backpropagation
 - Variants of Gradient Descent
 - Types of Deep Networks
 - Feed forward neural networks (FNN)
 - Convolutional neural networks (CNN)
 - Recurrent Neural networks (RNN)
 - Generative Adversal Neural Networks (GAN)
 - Restrict Boltzman Machine (RBM)

- **Deep Learning with Keras**
 - Define Keras
 - How to compose Models in Keras?
 - Sequential Composition
 - Functional Composition
 - Predefined Neural Network Layers
 - What is Batch Normalization?
 - Saving and Loading a model with Keras
 - Customizing the Training Process
 - Intuitively building networks with Keras

- **Convolutional Neural Networks (CNN)**
 - Introduction to Convolutional Neural Networks
 - CNN Applications
 - Architecture of a Convolutional Neural Network
 - Convolution and Pooling layers in a CNN
 - Understanding and Visualizing CNN
 - Transfer Learning and Fine-tuning Convolutional Neural Networks

- **Recurrent Neural Network (RNN)**
 - Intro to RNN Model
 - Application use cases of RNN
 - Modelling sequences
 - Training RNNs with Backpropagation
 - Long Short-Term Memory (LSTM)
 - Recursive Neural Tensor Network Theory
 - Recurrent Neural Network Model
 - Time Series Forecasting

- **Natural Language Processing**
 - NLP with python
 - Bags of words
 - Stemming
 - Tokenization
 - Lemmatization
 - TF-IDF
 - Sentiment Analysis

- **Overview of Tensor Flow**
 - What is Tensor Flow?
 - Tensor Flow code-basics
 - Graph Visualization
 - Constants, Placeholders, Variables
 - Tensor flow Basic Operations
 - Linear Regression with Tensor Flow
 - Logistic Regression with Tensor Flow
 - K Nearest Neighbor algorithm with Tensor Flow
 - K-Means classifier with Tensor Flow
 - Random Forest classifier with Tensor Flow

- **Neural Networks Using Tensor Flow**
 - Quick recap of Neural Networks
 - Activation Functions, hidden layers, hidden units
 - Illustrate & Training a Perceptron
 - Important Parameters of Perceptron
 - Understand limitations of A Single Layer Perceptron
 - Illustrate Multi-Layer Perceptron
 - Back-propagation – Learning Algorithm
 - Understand Back-propagation – Using Neural Network Example
 - TensorBoard