

A photograph of three business professionals (two men and one woman) sitting around a table, smiling and looking at the camera. They are dressed in business attire. The image is overlaid with a semi-transparent dark grey box containing text.

# Become a Deep Learning Expert

The most promising career in the 21<sup>st</sup> century

Deep Learning Expert  
Course Syllabus

[www.datamites.com](http://www.datamites.com) | [enquiry@datamites.com](mailto:enquiry@datamites.com) | [corporate@datamites.com](mailto:corporate@datamites.com)

**INDIA : 1800 313 3434 | SG: +65 3159 3972 | USA : +1 41 585 224 77 | UK : +44 20808 99220**



International Association of  
Business Analytics Certification

**Data**mites

Global Institute for Data Science

*DataMites™ is Registered Education Partner of IABAC*

# Instructor Led Classroom / Live Online Training

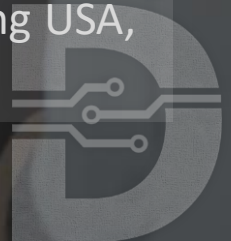
2 +3 Month  
₹ 92,000/-

Instructor led training is the most important phase of the course. DataMites provides flexible learning channels

- Traditional Classroom Training
- Live Instructor Led Online Training
- Self Paced Learning / E-learning

Regular Classroom Trainings are conducted in all major cities including Amsterdam (NL), Singapore (SG), Bangalore(IND) , Chennai(IND), Hyderabad(IND) etc.,

Live Instructor Led Online Training is aligned with regional time-zones including USA, UK, Europe, India and Australia.



# Deep Learning Expert

## Deep Learning Track 8 Courses Bundle

**Data**mites

Global Institute for Data Science

1. Machine Learning Primer

2. Advanced Python for Deep Learning

3. TensorFlow 2.0 and Keras for Deep Learning

4. Mathematics for Deep Learning

5. Deep Learning Foundation

6. Adv Deep Learning - CNN, RNN , LSTM RNN

7. Big Data - PySpark Foundation

8. Deep Learning Projects

Internship (Optional)



Course Duration :  
2 Months / 64 Hours



Course Fee : INR. 92,000/-



5+ Live Client Projects



24x7 Data Science Cloud lab  
access for 1 year



Placement Assistance  
Included



# 1. Machine Learning Primer

## Deep Learning Track – Core Module

Course ID: DL3010

**Data**mites

Global Institute for Data Science

### Module 1 Machine Learning Primer

Machine Learning core concepts, scalable algorithms, project workflow.

### Module 2 Objective Functions and Regularization

Understanding Objective Function of ML Algorithms

### Module 3 Metrics, Evaluation Methods and Optimers

Popular Metrics in Detail : R2 Score, RMSE, Cross Entropy, Precision, Recall, F1 Score, ROC-AUC, SGD, ADAM

### Module 4 Artificial Neural Network in Detail

ANN in Details, Forward Pass and Back Propagation

### Module 5 Machine Learning Vs Deep Learning

Core difference b/w ML and DL from implementation perspective.



Duration : 8 Hrs.

1-Day Classroom / 3-Day  
Online Training



Course Fee : INR. 15,000/-



24x7 Data Science Cloud lab  
access for 1 year



Placement Assistance  
Included



# 2. Adv Python for Deep Learning

## Deep Learning Track – Core Module

Course ID: DL3015

**Data**mites

Global Institute for Data Science

- Module 1 Python Programing Primer**  
Installing Python, Programming basics, Native Data types
- Module 2 Class , Inheritance and Magic Functions**  
Python Classes, Inheritance Concepts, Magic Functions
- Module 3 Special Functions in Python**  
Overview, Array, selecting data, Slicing, Iterating, Array Manipulations, Stacking, Splitting arrays, Key functions
- Module 4 Decorators and Special Functions**  
Decorators implementation with class
- Module 5 Context Manager ‘with’ in Python**  
Context Manager application
- Module 6 Exception Handling**  
Try and Catch block
- Module 7 Python Package Management**  
Bundling and export python packages



Duration : 4 Hrs.

1-Day Classroom / 2-Day  
Online Training



Course Fee : INR. 9,000/-



24x7 Data Science Cloud lab  
access for 1 year



Placement Assistance  
Included



# 3. TensorFlow 2.0 for Deep Learning

## Deep Learning Track – Core Module

Course ID: DL3020

**Data**mites

Global Institute for Data Science

### Module 1 TensorFlow 2.0 Basics

TensorFlow core concepts, Tensors, core APIs

### Module 2 Concrete Functions, Datatypes, Control Statements

Polymorphic Functions, Concrete Functions, Datatypes, Control Statements, NumPy, Pandas

### Module 3 Autograph eager execution

tf.function autograph implementation. Sessions vs tf.function

### Module 4 Keras (TensorFlow 2.0 Built-in API) Overview

Sequential Models, configuring layers, Loading data, train and test, complex models, call backs, save and restore Neural network weights.

### Module 5 Building Neural Networks in Keras

Building Neural networks from scratch in Keras,

### Module 6 Implementing RNN, CNN in Keras

Building Recurrent Neural Networks for sequence data and Convolution Neural Networks for Image Classification



Duration : 8 Hrs.

1-Day Classroom / 3-Day  
Online Training



Course Fee : INR. 16,000/-



2+ Industry Projects



24x7 Data Science Cloud lab  
access for 1 year



Placement Assistance  
Included



# 4. Mathematics for Machine Learning

## Deep Learning Track – Core Module

Course ID: DL3025

**Data**mites

Global Institute for Data Science

### Module 1 Linear Algebra

Vectors, Matrices, Linear Transformation, Eigen Vectors, Matrix Operations, Special Matrices

### Module 2 Calculus - Derivatives

Calculus essentials, Derivates and Partial Derivates, Chain Rule, Derivates of special functions

### Module 3 Probability Essentials

Probability basics and notations, Conditional probability, Essential Probability theorems for Machine Learning.

### Module 4 Special functions

Relu, Sigmoid, SoftMax, Popular Loss Functions – Cross Entropy, Quadratic Loss Functions.



Duration : 4 Hrs.

1-Day Classroom / 2-Day  
Online Training



Course Fee : INR. 8,000/-



24x7 Data Science Cloud lab  
access for 1 year



Placement Assistance  
Included



# 5. Deep Learning Foundation

## Deep Learning Track – Core Module

Course ID: DL3030

**Data**mites

Global Institute for Data Science

- Module 1 Deep Learning Networks Concepts**  
Core concepts of Deep Learning Networks
- Module 2 Deep Dive into Activation Functions**  
Relu, Sigmoid, Tanh, SoftMax, Linear
- Module 3 Building simple Deep Learning Network**  
Simple DL network from starch.
- Module 4 Tuning Deep Learning Network**  
Tuning Deep Learning Network Parameters for optimal performance, Stopping Criteria.
- Module 5 Visualizing Training using TensorBoard**  
Visualizing Deep Learning Network using TensorBoard



Duration : 8 Hrs.

1-Day Classroom / 3-Day  
Online Training



Course Fee : INR. 18,000/-



3+ Industry Projects



24x7 Data Science Cloud lab  
access for 1 year



Placement Assistance  
Included





# 6. Advanced Deep Learning

## Deep Learning Track – Core Module

Course ID: DL3035

**Data**mites

Global Institute for Data Science

- Module 1 Deep Learning Architectures**  
Popular Deep learning Architectures – CNN, RNN, LSTM RNN, GRU RNN Introduction
- Module 2 Deep Dive into Convolution Neural Network**  
Core Concepts of Convolution Neural Network, Feature Maps, Relu Activation, Max Pooling
- Module 3 CNN Application – Image Classification**  
Image Classification implementation with CNN TensorFlow 2.0 (Keras)
- Module 4 Recurrent Neural Networks (RNN) Basics**  
RNN Architecture, BPTT Back Prop through time, Mathematics of RNN
- Module 5 RNN, LSTM RNN and GRU RNN**  
Vanishing Gradient and exploding Gradient problem, LSTM architecture, GRU Architecture.
- Module 6 LSTM RNN implementation in TensorFlow**  
LSTM RNN project.



Duration : 16 Hrs.  
2-Day Classroom / 6-Day  
Online Training



Course Fee : INR. 24,000/-



3+ Industry Projects



24x7 Data Science Cloud lab  
access for 1 year



Placement Assistance  
Included



# 7. Big Data - PySpark Foundation

## Deep Learning Track – Core Module

Course ID: DL3040

**Data**mites

Global Institute for Data Science

### Module 1 Basics of PySpark

PySpark API core functions, workflow

### Module 2 Importing Big Data

PySpark functions for import data from various sources and other big data frameworks.

### Module 3 Machine Learning with PySpark

Implementing scalable ML models with PySpark.



Duration : 4 Hrs.

1-Day Classroom / 2-Day  
Online Training



Course Fee : INR. 9,000/-



24x7 Data Science Cloud lab  
access for 1 year



Placement Assistance  
Included



# 8. Deep Learning Projects

## Deep Learning Track – Core Module

Course ID: DL3045

**Data**mites

Global Institute for Data Science

- PROJECT 1**      **Image Classification**  
Image Classification with CIFAR-10 Dataset
- PROJECT 2**      **Human Face Detection**
- PROJECT 3**      **Traffic Sign Detection**
- PROJECT 4**      **Human Activity Detection**  
20BN-something-something Dataset V2
- PROJECT 5**      **Image Caption Generation**

\*Candidates can choose any two of above Deep Learning Projects or come up with their own project ideas and complete with Mentors support



Duration : 2 Months  
Mentored Project Execution



Course Fee : INR. 24,000/-



3+ Industry Projects



24x7 Data Science Cloud lab  
access for 1 year



Placement Assistance  
Included



# Datamites

Global Institute for Data Science

[www.datamites.com](http://www.datamites.com) | [enquiry@datamites.com](mailto:enquiry@datamites.com) | [corporate@datamites.com](mailto:corporate@datamites.com)

**INDIA : 1800 313 3434 | SG: +65 3159 3972 | USA : +1 41 585 224 77 | UK : +44 20808 99220**

Follow us on:

[Twitter.com/DataMites](https://twitter.com/DataMites)

[Facebook.com/DataMites](https://facebook.com/DataMites)

[Linkedin.com/company/DataMites](https://linkedin.com/company/DataMites)

[Youtube.com/c/DataMites](https://youtube.com/c/DataMites)

