



# Become a Data Science Professional

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

Data Scientist Track  
CDS 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*

# PHASE - 2

## Instructor Led Classroom / Live Online Training

2-Months  
₹ 88,000/-

Instructor led training is the most important phase of the course. DataMites provides flexible learning channels for the Phase – 2

- 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.



# Data Scientist Track SYLLABUS

Certified Data Scientist - 10 Courses Bundle

**Data**mites

Global Institute for Data Science

1. Data Science Foundation

2. Python for Data Science

3. Statistics for Data Science

4. Machine Learning Associate

5. Machine Learning Expert

6. Time Series Foundation

7. Model Deployment (Flask-API)

8. Deep Learning - CNN Foundation

9. SQL for Data Science

10. Tableau Foundation



Course Duration :  
2 Months / 64 Hours



Course Fee : INR. 88,000/-



5+ Live Client Projects



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Placement Assistance  
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# 1. Data Science Foundation

## Data Scientist Track – Core Module

Course ID: DS1016



Global Institute for Data Science

- Module 1 Introduction to Data Science  
Evolution of Data Science
- Module 2 Data Science vs Business Analytics vs Big Data  
Comparing various related domains with Data Science
- Module 3 Classification of Business Analytics  
Descriptive Analytics, Predictive Analytics, Discovery Analytics and Prescriptive Analytics
- Module 4 Data Science project workflow  
6 States of Data Science Project workflow
- Module 5 Various Roles in Data Science  
Industry roles and responsibilities
- Module 6 Application of Data Science in various industries



Duration : 8 Hrs.  
1-Day Classroom / 3-Day  
Online Training



Course Fee : INR. 18,000/-



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# 2. Python for Data Science

## Data Scientist Track – Core Module

Course ID: DS1005

**Data**mites

Global Institute for Data Science

- Module 1** Introduction to Data Science with Python  
Installing Python, Programming basics, Native Data types
- Module 2** Python Basics: Basic Syntax, Data Structures  
Data objects, Math, comparison operators, condition statements, loops, lists, tuples, sets, dicts, functions
- Module 3** Numpy Package  
Overview, Array, selecting data, Slicing, Iterating, Array Manipulations, Stacking, Splitting arrays, Key functions
- Module 4** Pandas Package  
Overview, Series and DataFrame, Data manipulation.
- Module 5** Python Advanced: Data Mugging with Pandas  
Histogram, grouping, aggregation, treating missing values, removing duplicates, Transforming data
- Module 6** Python Advanced: Visualization with Matplotlib
- Module 7** Exploratory Data Analysis:  
Data Cleaning, Data Wrangling
- Module 8** Exploratory Data Analysis: Case Study



Duration : 8 Hrs.  
1-Day Classroom / 3-Day  
Online Training



Course Fee : INR. 18,000/-



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# 3. Statistics for Data Science

## Data Scientist Track – Core Module

Course ID: DS1015

- Module 1** Introduction to Statistics  
Descriptive and Inferential Statistics. Definitions , terms, types of data
- Module 2** Harnessing Data  
Types of Sampling Data. Simple random sampling, Stratified, Cluster sampling. Sampling error.
- Module 3** Exploratory Analysis  
Mean, Median and Mode, Data variability, Standard deviation, Z-score, Outliers
- Module 4** Distributions  
Normal Distribution, Central Limit Theorem, Histogram, Normalization, Normality tests, skewness, Kurtosis.
- Module 5** Hypothesis & computational Techniques  
Hypothesis Testing, Null Hypothesis, P-value, Type I & II errors, parametric testing: t- tests, anova test, non-parametric testing
- Module 6** Correlation & Regression



Duration : 8 Hrs.  
1-Day Classroom / 3-Day  
Online Training



Course Fee : INR. 16,000/-



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Placement Assistance  
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# 4. Machine Learning Associate

## Data Scientist Track – Core Module

Course ID: DS1030

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Global Institute for Data Science

- Module 1** Machine Learning Introduction  
What is ML? ML vs AI. ML workflow, statistical modeling of ML. Application of ML
- Module 2** Machine Learning Algorithms  
Popular ML algorithms, clustering, classification and regression, supervised vs unsupervised. Choice of ML
- Module 3** Supervised Learning  
Simple and Multiple Linear regression, KNN, and more.
- Module 4** Linear Regression and Logistic Regression  
Theory of Linear regression, hands on with use cases
- Module 5** K-Nearest Neighbour (KNN)
- Module 6** Decision Tree
- Module 7** Naïve Bayes Classifier
- Module 8** Unsupervised Learning  
K-means Clustering.



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



Course Fee : INR. 27,000/-



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# 5. Machine Learning Expert

## Data Scientist Track – Core Module

Course ID: DS1031

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Global Institute for Data Science

- Module 1    Advanced Machine Learning Concepts**  
Tuning with Hyper parameters. Popular ML algorithms, clustering, classification and regression, supervised vs unsupervised. Choice of ML
- Module 2    Random Forest – Ensemble**  
Ensemble theory, random forest tuning
- Module 3    Support Vector Machine (SVM)**  
Simple and Multiple Linear regression, KNN,
- Module 4    Natural Language Processing (NLP)**  
Text Processing with Vectorization, Sentiment analysis with TextBlob, Twitter sentiment analysis.
- Module 5    Naïve Bayes Classifier**  
Naïve Bayes for text classification, new articles tagging
- Module 6    Artificial Neural Network (ANN)**  
Basic ANN network for regression and classification
- Module 7    Tensorflow overview and Deep Learning Intro**  
Tensorflow work flow demo and intro to deep learning.



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



Course Fee : INR. 36,000/-



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# 6. Time Series Analysis

Data Scientist Track – Core Module

Course ID: DS1074

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1. What is Time Series?
2. Trend, Seasonality, cyclical and random
3. White Noise
4. Auto Regressive Model (AR)
5. Moving Average Model (MA)
6. ARMA Model
7. Stationarity of Time Series
8. ARIMA Model – Prediction Concepts
9. ARIMA Model Hands on with Python
10. Case Study Assignment on ARIMA



Duration : 4 Hrs.

1-Day Classroom / 2-Day  
Online Training



Course Fee : INR. 9,000/-



5+ Industry Projects



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# 7. Model Deployment - API

Data Scientist Track – Core Module

Course ID: DS1080

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**Module 1** Basics of Application Program Interface (API)  
API basics, loosely coupled architecture.

**Module 2** Installing Flask and Flask\_cors  
Installation and configuring Flask and cross domain authentication.

**Module 3** End of End ML project with API deployment  
Complete project flow with API deployment and assessing through website.



Duration : 4 Hrs.  
1-Day Classroom / 2-Day  
Online Training



Course Fee : INR. 9,000/-



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# 8. Deep Learning CNN Foundation

## Data Scientist Track – Core Module

Course ID: DS1051

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- Module 1** Introduction to Deep learning  
What is Deep Learning?, Various Deep Learning models in practice and applications.
- Module 2** Introduction to Image Basics  
Image resolution, pixels, image manipulations with filters.
- Module 3** Convolution Neural Network CNN Intro  
CNN essentials, CNN Architecture, work flow of image classification with CNN
- Module 4** Case Study: Keras–Tensorflow image classification  
CNN hands on application for classification images of Cats and Dogs



Duration : 4 Hrs.  
1-Day Classroom / 2-Day  
Online Training



Course Fee : INR. 9,000/-



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# 9. Tableau Foundation

## Data Scientist Track – Core Module

Course ID: DS1063

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### Module 1 Tableau Introduction

Tableau Interface, Dimensions and measures, filter shelf, Distributing and publishing

### Module 2 Connecting to Data Source

Connecting to sources, excel, data bases, api , pdf. Extracting and interpreting data.

### Module 3 Visual Analytics

Charts and plots with Super Store data

### Module 4 Forecasting

Forecasting time series data. Sales.



Duration : 4 Hrs.

1-Day Classroom / 2-Day  
Online Training



Course Fee : INR. 9,000/-



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# 10. SQL for Data Science

## Data Scientist Track – Core Module

Course ID: DS1070

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**Module 1** Install SQL packages and Connecting to DB  
SQLAlchemy , PyMySQL

**Module 2** RDBMS (Relation Database Management) Basics  
Basics of SQL DB, Primary key , Foreign Key

**Module 3** SELECT SQL command, WHERE Condition  
Retrieving data with SELECT SQL command and WHERE Condition to Pandas Data Frame.

**Module 4** SQL JOINS  
Left Join, Right Joins, multiple joins



Duration : 4 Hrs.  
1-Day Classroom / 2-Day  
Online Training



Course Fee : INR. 9,000/-



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