

Machine Learning

Big Data

Statistics

Data  
Engineering

Deep Learning

Post Graduate  
Program in

# DATA SCIENCE

Online Training and Certification Program

Jointly Delivered by



edu plus now<sup>®</sup>



Indian Statistical Institute  
Pune Unit



edu plus now is an educational initiative of the Vishwakarma Group, which includes the Vishwakarma Institute of Technology, Pune. Its intent is to bridge the skill gap between conventional learning methods, meet real industry challenges and help the learner achieve their career potential.

Aimed at providing learners with essential skills, edu plus now courses are created with inputs from industry experts and highly-qualified professionals.

At edu plus now, we believe in preparing students for success in a changing world by providing classroom based courses, online courses or even blend of both these modes of teaching so that the students pave the path for a successful career.



**Indian Statistical Institute**  
Pune Unit

It is a Central Government institute, devoted to research, teaching & application of not only statistics and allied sciences, but also the natural sciences, social sciences and their interface with the statistics. Founded by Professor P.C. Mahalanobis in Kolkata on 17th December, 1931, the institute gained the status of an Institution of National Importance by an act of the Indian Parliament in 1959.

ISI Pune is a unit of Indian Statistical Institute, active in Teaching, Training, Research and Consulting on the application of statistics, operations research & allied science to solve problems of the industry across the spread and depth of the industries. ISI Pune brings the sanctity of statistics in the mother initiatives such as TQM, TPM, Six Sigma, Quality Management, Management Systems, Business Management, Data Analytics, Data Science.

## Course Description

The Post Graduate Program in Data Science is jointly created & delivered by Indian Statistical Institute, Pune and edu plus now along with industry experts.

Our tailor-made curriculum includes functional analytics, SQL, Statistical Analysis, Text Mining, Regression Modeling, Hypothesis Testing, Predictive Analytics, Machine Learning using R, Python, Deep Learning, Neural Networks, Natural Language Processing, Predictive Modeling, Tableau, Spark, Hadoop, etc. which will help you acquire in-demand skills and start a career as an accomplished data scientist.

## Who Can Enroll?

- Fresh graduates with interest in Data Science, Machine Learning and AI
- Working professionals / managers and above who would need to extract information from data that they routinely encounter from areas such as Retail, Banking, BPO, IT, Sales & Marketing, Supply chain, Strategic management, etc.
- Software Programmers
- Marketing and Sales Professionals
- Individuals interested in Data Science

## Course Highlights

- Advisory Board members from Industry & Academia
- Capstone Project spanning throughout the course duration
- Separate batches for working professionals
- Industry-Endorsed Curriculum
- Aptitude and Soft Skills Development
- Leading Technical Faculty with Domain Expertise
- Placement Assistance

## Learning Outcomes

- Gain expertise in Data Engineering, Data Analytics, Machine learning & Data Visualization
- Master descriptive and inferential statistics, hypothesis testing, regression analysis, data blending, data extracts, and forecasting

## Introduction to Data Science and areas of applications

### Data Engineering

#### SQL

- SQL Overview
- SQL SELECT Statements
- SQL Functions and Expressions
- SQL Updating
- SQL Sub Queries and Unions
- SQL Summarization

#### Hadoop

- Hadoop Architecture
- Basic Features: HDFS Data Characteristics
- Map Reduce Architecture
- HDFS Architecture
- Hive Architecture.

#### MongoDB

- Introduction to MongoDB
- Introduction to NoSQL
- MongoDB Query Document
- Creating, Reading and Updating Data

#### Spark & Scala

- Spark Architecture
- RDD Fundamentals
- Basic Scala Programming
- Spark SQL introduction
- Spark SQL Data frames
- Spark Job Extraction
- Into Spark Streaming
- Intro to Recommendations system

### Data Analytics, Machine Learning & Deep Learning

#### Statistics concepts

- Basic Statistical concepts
- Exploratory Data Analyses
- Estimation and hypotheses testing
- Multiple Linear Regressions
- Categorical Data Analyses
- Introduction to Logistic Regression for Classification and Risk Analysis
- Regression Analysis
- Classification using Linear and Quadratic Discriminant Analysis
- Classification using Support Vector Machines
- Tree Based Methods
- Principal Component Analysis and Factor Analysis

#### R Studio

- Introduction to R and R studio
- Vectors
- Testing of hypothesis and Confidence Interval
- Linear Regression -
- Logistic Regression
- Decision Trees/CART -
- Supervised and Unsupervised learning
- Naïve Bayes Classifier
- Principal Component Analysis
- Factor Analysis
- Discriminant Analysis
- Time Series Analysis
- k-means clustering
- Market Basket Analysis

#### Advance Excel

- Excel Worksheet Structuring
- Formatting Tips
- Reference Functions
- Pivot Tables, Pivot Charts, Template, Consolidation
- What if Analysis
- Database Functions
- Macro's

#### Python Programming

- Variables, Data structures & Control flow
- Functions, Procedural Approach, Modules, File Handling
- Algorithms, Debugging & Bug Fixing

#### Machine Learning using Python

- Machine Learning
- Types of Machine Learning
- Phases of Machine Learning Project
- Doing Machine Learning using Tool
- Machine Learning Ecosystem in Python
- Pandas for Data Preprocessing & Cleanup
- Machine Learning Model Creation
- Machine Learning Algorithms

#### Deep Learning

- Setting up the Environment
- Theoretical Foundation of Deep Learning
- Understanding Neural Networks ANN, CNN, RNN
- Natural Language Processing
- Computer Vision
- Application to Image processing /Text processing

### Data Visualization

#### Tableau

- Introduction
- Visualization Design and Data Types
- Tableau and Data Connections
- Chart Types, Dashboards and Work Sharing

#### Power BI

- Introduction to Power BI
- Extracting Data
- Power Query for Data Transformation
- Power Pivot for Data Modeling
- Data Visualization with Analytics

## Course Duration

- 6 MONTHS - WEEKDAY BATCH (MON - FRI)
- 6 MONTHS - WEEKEND BATCH (SAT - SUN)



Indian Statistical Institute  
Pune Unit

## Eligibility

- All Graduates / Post Graduates – Engineering, IT, Computer Science, Mathematics, Statistics, Actuarial Science, Economics, Life Science, Electronics
- MBA All Streams
- **Selection:** One on one selection process

## Assessment

Periodic assessment and case studies evaluations by the Indian Statistical Institute, Pune and edu plus now have been built-in throughout the duration of the course.

**Certification - Awarded Jointly by The Indian Statistical Institute, Pune and edu plus now**

## Job Possibilities in following sector

- IT Companies
- In-house analytics units of corporations
- Niche analytics firms
- MNC financial institutions, Pharma, Retail, Healthcare, Oil & Gas Industry, Telecommunication, Insurance & Manufacturing Companies

## Job Roles

- Data Analyst
- Data Engineer
- Data Scientist
- Business Analyst
- Machine Learning Engineer

**COURSE FEE: INR 2,00,000 (+GST)**

**edu plus now in association with the Indian Statistical Institute (ISI), Pune will jointly deliver courses in programs**

- Six Sigma Yellow Belt
- Six Sigma Green Belt
- Six Sigma Black Belt
- Master Black Belt
- Lean Six Sigma Supplement Program
- Design for Six Sigma Supplement



An initiative of Vishwakarma Group Pune.


Vishwakarma Institute of Technology (VIT, Pune), Vishwakarma Institute of Information Technology (VIIT, Pune), Vishwakarma University (VU, Pune), Vishwakarma Schools, Wisdom World School

Other initiatives of Vishwakarma Group




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