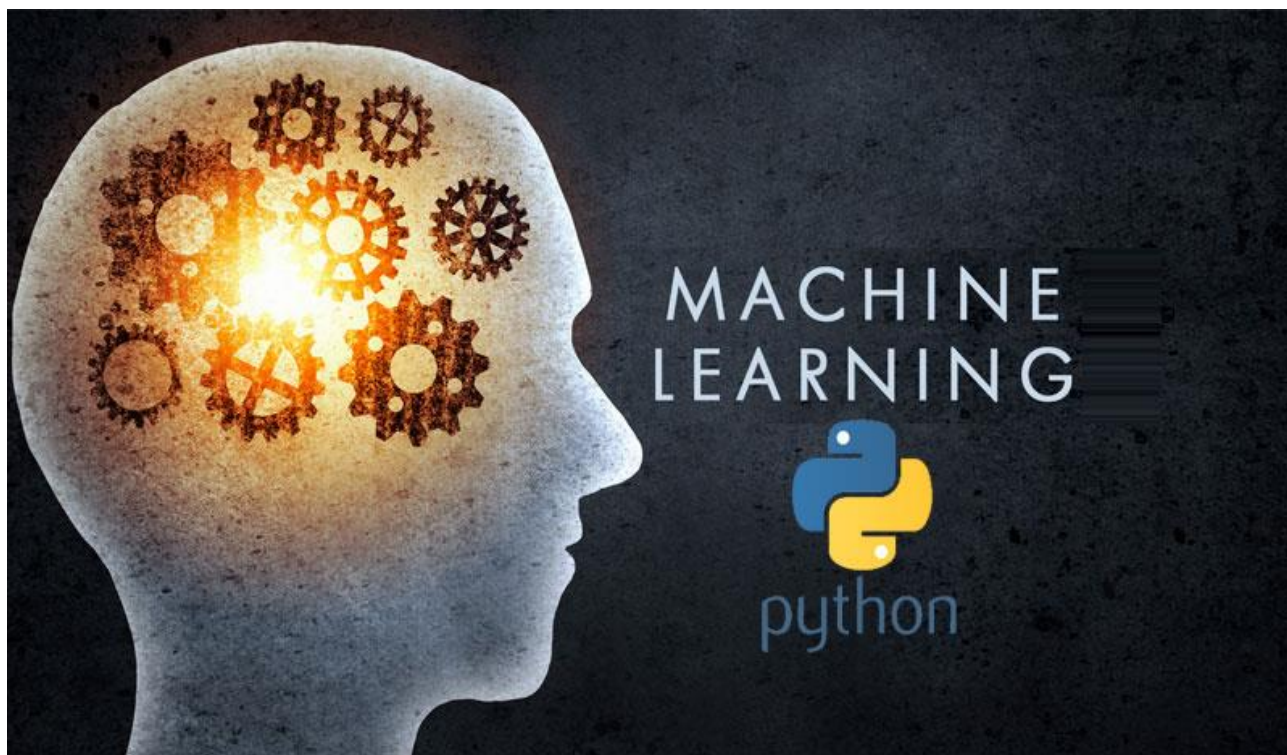# Machine Learning with Python

Certification 2-8 Weeks / 30-40 Hours
Industry ready exhaustive program
Internship & Training Program
Make Projects & Get Trained

About EduVitae Services

EduVitae Services, run by **IITians & industry experts**, is a renowned provider of education, training, research and development programs, with a large presence. We offer a wide range of specific industry ready courses and training opportunities in the areas of computer science and IT, animation and multimedia, as well as engineering, management and advanced technology. Our programs include workshops, training, internships, corporate training, certificate courses, placement training, research, and development programs, all designed to meet the needs of students, professionals, academic institutions, and industry. Our reputation as one of the best technology training providers, is a testament to our commitment to helping our students and clients acquire the skills and knowledge they need to succeed in their careers and goals.

Our Clientele/Collaborations

Top private & government academic institutions, college's fests and corporates where directly/indirectly our presence have been felt:

Indian Institute of Technology, Kanpur

Indian Institute of Technology (Banaras Hindu University), Varanasi

Indian Institute of Technology (ISM), Dhanbad

Indian Institute of Technology, Jodhpur

Indian Institute of Technology, Bhubaneswar

Blithchron, Indian Institute of Technology, Gandhinagar

Indian Institute of Technology, Guwahati

Indian Institute of Technology, Patna

Indian Institute of Management (IIM), Lucknow

Indian Institute of Management (IIM), Indore

National Institute of Technology, Surat

National Institute of Technology, Bhopal

National Institute of Technology, Warangal

National Institute of Technology, Trichy

Chandigarh University

DIC, Department of Applied Arts (Visual Arts), Banaras Hindu University, Varanasi

Madan Mohan Malaviya University of Technology, MMMUT Gorakhpur

Maharaja Agrasen Institute of Technology, Delhi

Thapar Institute of Engineering & Technology, Punjab

Assam Engineering College, Assam

Jaypee University of Engineering & Technology

Shillong College, Meghalaya

SRCC, Delhi University

Kendriya Vidyalaya, India

DAV School, India

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Industry/Corporate/Startups/Government

MapsCrew

Rabbixel

CreativeHatti

Accenture

Capgemini

F1 Digitals

TIH IIT Roorkee, DST, Govt. of India

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and many more tech & non-tech colleges/universities/institutes/schools & organizations/startups/companies across India and globe.

Achievements & Milestones

- ✓ Our alumni / students are working in top notch company of India & MNCs **VMware, Infosys, Cognizant, CGI, Fidelity, Razorpay, EXL, CARS24, Tata Steel, NVIDIA, MyKaarma, Oyo Rooms, Samsung, Walmart Labs, L&T, JIO, Citibank, TCS, Accolite, BNY Mellon**, and many more.

- ✓ Conducted a number of workshop/training/internship programs in many colleges/universities/schools like **IITs, IIMs, NITs, IISc** & other prestigious institutions of India & with the corporates too.

- ✓ Trained many college/university/school students, some of them have created a milestone for **EduVitae Services** by meeting with **Shri Narendra Damodardas Modi** (Prime Minister of India) related to some **robotics projects**.

- ✓ Collaborating with Industries / Corporates / Startups to provide them hiring services (helping them to hire fresh trained talent with us).

- ✓ Signed MOUs / worked with top notch colleges / universities / schools / organizations like **Techkriti IIT Kanpur, Technex IIT (BHU) Varanasi, Wissenaire IIT Bhubaneswar, Techniche IIT Guwahati, Concetto IIT (ISM) Dhanbad, Pravega IISc Bangalore, IGNUS IIT Jodhpur, Ranbhoomi IIM Indore, IIM Lucknow, MMMUT GKP, NIT Surat, NIT Bhopal, NIT Warangal, NIT Trichy, Chandigarh University, Thapar University, SRCC DU, KMC DU, TIH IIT Roorkee DST Govt. of India** and many other academic institutions for professional / industry ready & learning skills training / workshop / internship programs.

Prerequisites

Participants from 1st year/ 2nd year / 3rd year / 4th year of CSE/IT/MCA/BCA/MSc/BSc-IT/ECE/EE/Other branch/stream will get more benefit after joining this program and other interested students / learners can also participate in that as per their requirement.

What is required before joining this training program?

Here's the checklist

1. A laptop with Microsoft Windows (7 or later) configuration along with smartphone as per need/requirement.
2. Laptop Charger/Adapter for charging purpose.
3. USB Mouse for designing purpose (if required).
4. Internet Connectivity (Typically to be able to do video call / conferencing, if the program is in online mode)
5. Notepad & Pen/Pencil for important notes and most important your interest & dedication.

Training Deliverables & Takeaways

Every participant will get

- ✓ Industry Ready Curriculum
- ✓ Interactive & Doubt Session
- ✓ Certification Program
- ✓ Mini & Major Projects
- ✓ Career Guidance
- ✓ Projects/Practical Based Learning

Course & Content

All of the sessions will be theoretical & practical oriented, so it will be really great if participant(s) can look on the syllabus which we are going to cover during training days.

Machine Learning with Python

Section #1
Introduction
- Introduction of Artificial Intelligence and Machine Learning
- Brief introduction to Machine Learning for AI
- What we will cover in this course
- Difference between Machine Learning and Artificial Intelligence
- Machine Learning Technique
- Tool and Technology required
- Installation

Section #2
Python programming & Computer Science
- Types
- Variable
- Flow control
- Data Structures
- Functions
- OOP
- Time complexity
- Recursion
- Library and packages

#Assignment 1

Section #3
Mathematics with Numpy
- What is Numpy
- Linear Algebra with the help of numpy
- Statics and Calculus
- Probability

Section #4
Matplotlib
- What is Matplotlib
- Plotting with matplotlib
- Types of plotting
- 3d plotting
- Visualizing the data

#Assignment 2

Section #5
Machine Learning
- Artificial Intelligence

- Brief introduction of machine Learning
- Types of machine Learning
- Introduction of deep Learning
- Relation between Machine Learning and deep learning

Section #6
Operation for Machine Learning
- Feature selection
- Training and test data
- Cross Validation
- Overfitting
- Training of model
- Loss function and accuracy

#Assignment 3

Section #7
ML Algorithms with Using Sklearn
- Introduction of Sklearn
- Linear Regression
- Logistic Regression
- Decision Tree
- Random Forest
- K Nearest Neighbour
- Support Vector
- KMeans

Section #8
Deep Learning
- Introduction of Neural Network
- Sigmoid Neuron
- Train of Sigmoid Neuron with Scratch Python
- Feed Forward Neural Network
- Back Propagation Algorithms and analysis

#Assignment 4

Section #9
Deep Learning with Keras and Tensorflow
- Introduction of tensorflow and keras
- Neural network creation with keras and tensorflow
- Loss function and optimizer in tensorflow
- Multilayer Neural Network
- Dataset in Tensorflow
- Use trained Model

#Assignment 5

Section #10
Natural Language Processing
- Tokenization
- Stemming and Lemmatization
- Bag of words
- TF-IDF

- RNN

Section #11
Computer Vision
- Image and Opencv
- Operation on Image
- CNN
- ImageNet and AlexNet
- Inception V1

Section #12
Flask & Deploy
- Introduction of Flask
- Machine Learning model to Flask project
- Basic HTML and css
- Deploy Flask Project into cloud

Lab and Projects
- Iris predictor web app using flask
- Mask Detection
- Movie Rating
- Handwritten digit recognition using flask
- Story creation using NLP