

*“Vitti offers certified project based training program in advanced Python for Data Analytics”*

# PYTHON PROJECTS ON PYTHON FOR DATA ANALYTICS

10  
MODULES

2  
INDUSTRY  
PROJECTS

15  
INSTRUCTOR  
LED SESSIONS

2 Months course

This Python Programming Course covers both concepts and project of Python like Data Structures & Types, writing python scripts, sequence and file operations, Graphs & Plots, Data Wrangling, Statistical Computation etc. This course will also offer practical exposure to some of the important and widely used Python Programs like Pandas, Numpy, Matplotlib, Anaconda, Scipy etc.



Python is a very powerful open-source language that has powerful libraries for data manipulation and analysis. For a longtime, Python has been used in scientific computing and highly quantitative domains such as Healthcare, Transportation, Retail & Finance. As of today, it is the most preferred language for Artificial Intelligence, Robotics and Web Development.

### Program Outcome

On completion of the program, students will be able to do the following

- Write python scripts, unit test code
- Learn techniques to work with different types of data sets
- Learn data visualization
- Practical exposure Using Jupyter notebooks, master the art of presenting step by step data analysis





## PROGRAM HIGHLIGHTS

Especially developed in collaboration with academia & AI Industry experts to reskill and retool working professionals towards Artificial Intelligence space. This program offers the benefits of Experienced Faculty Led Sessions: Live-Interactive Online classes and Project based Learning. Program content & structure designed in collaboration with Industry experts.

### CERTIFICATION

### “PYTHON FOR DATA ANALYTICS PROFESSIONAL”



**PROJECTS:** Each student will get hands on practical experience in computer vision (CV) and Natural Language Processing (NLP).



**ATIVITTI ADVANTAGE:** Ativitti Interactive Digital Learning Platform ensures par excellence, quality education anytime in pervasive environment.



**ACCESS TO LMS:** You get access to Learning Management System (LMS) where presentations, quizzes, installation guide & class recordings are there.



**24 X 7 EXPERT ONLINE:** Support team to resolve all your technical queries

## PROGRAM CONTENT Python Programming

30 HOURS

- 1 Introduction to Python Programming**
  - Installation of Python
  - Interactive Shell
  - User Interface or IDE , Pycharm, Eclipse, Visual Studio
  - Program structure in Python
  - Execution steps
  - Executable or script files.
- 2 Introduction to Packages**
  - Installation of packages
  - Using Anaconda, Numpy, Pandas
  - Scipy, Matplotlib
- 3 Data Structure and Types in different Packages**
  - Array
  - Lists
  - Tuples
  - Strings
  - Variables
  - Arithmetic and Logical operations
  - Date and Time
- 4 Statements and controls in Python**
  - Assignments, Expressions and prints
  - If tests and conditional logic
  - While and For Loops
  - Iterations and Comprehensions
- 5 Processing Texts**
  - Texts and Strings
  - Converting Strings to numbers
  - Converting numbers to strings
  - Concatenation of strings
- 6 Graphs and Plots**
  - Matplotlib package
  - Interactive graphs and Image files
  - Plotting graphs
  - Lines and Markers
  - Plotting several graphs in one figure
  - Colors
  - Controlling the graph
  - Histogram and different graphs
- 7 File Operations**
  - Opening a file
  - Closing a file
  - searching inside text file
  - Working with csv files
  - Working with Binary files
- 8 Data Wrangling**
  - Filtering out missing data.
  - Filling in missing data.
  - Finding outliers.
  - Re-shaping and Pivoting
  - Removing duplicates.
  - Replacing values.
  - Web Scraping
- 9 Statistical Computation**
  - Correlation & Co-variance.
  - Polynomials & Liner regression.
  - Statistical tests
- 10 Database Connection**
  - Files versus Database
  - Visual Studio and SQL
  - SQL queries in Python projects

## FACULTY



### DR. A. K. SINHA

He holds Ph.D. degree in Systems Modeling from IIT Delhi. He has 35 years of teaching, research and consultancy experience. Guided 7 Ph.D. and more than 30 MTech. scholars.



### DR. DEEPTI YADAV

She is an enthusiastic Data Scientist with 16 years of experience in teaching, research & consultancy and holds Ph.D. in machine learning based data analysis from IIT (Roorkee). Currently, she resides in Silicon Valley, USA and provides consultancy services.



### KUNAL GERA

Kunal Gera, a profound data scientist with rich experience of 8+ years. with national and international exposure worked on multiple projects such as consumer analytics, credit card analytics, NLP implementation, spend analysis.

## WHO SHOULD ATTEND

The Python Programming Course is a good fit for the below professionals:

- Students, Graduates, Freshers
- Developers, Programmers, Technical Leads, Architects
- Statisticians and Analysts
- Business Analysts & Business Intelligence Managers
- Project Managers who want practical exposure along with the course

## PRE-REQUISITES

- Willingness to learn and motivation.
- Basic understanding of programming will be beneficial

PROGRAM DETAILS:  
Duration: 2 months

## VITTI CERTIFICATION

On the payment of program fees and upon satisfying the requisite attendance and other evaluation criteria participants will be awarded a Certificate for completing course on **"PYTHON FOR DATA ANALYTICS"**.

### SAMPLE CERTIFICATE



### ADDRESS FOR COMMUNICATION

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