Python for Data Analytics

Why CFI Education

Classroom / Live and Self-paced Learning

Case Study Approach

Project work and Certification

Passionate Educators

Career Paths

Data Analyst

Business Analyst

Business Intelligence Analyst

Market Research Analyst

Consultant, among others

Free "CFI-AI Coach" Access for doubt clarity and interview preparation

DATA ANALYSIS WITH PYTHON

Explore the world of data analysis with Python!

- Learn to dissect data using multi-dimensional arrays in numpy
- Harness the power of data frames in pandas
- Leverage the scipy library for mathematical routines
- Delve into machine learning with scikit-learn.

This course provides hands-on experience through labs using real Python tools like Jupyter notebook in JupyterLab, making your journey into data analytics both insightful and practical.

MODULE 1
- Introduction
- Datatypes, Variables, and Operators
- String and its Associated Functions
- If-Else Statement

MODULE 2
- Regular Expressions
- Looping Statements
- Nested Loop
- Pattern-Based Problem

MODULE 3
- Data Structure in – Python:
- List
- Tuple
- Dictionary
- Functions in Python:
- Recursion
- Functions Return Statement
- Modules in Python

MODULE 4
- List Comprehension
- File Handling in Python:
- Reading, Writing, and Appending into Files
- Comparing Files
- Classes and Objects
- Inheritance and Polymorphism

MODULE 5
- Numpy for Creating Arrays
- Data Analysis Using Pandas
- Matplotlib for Graphical Representation

DATA ANALYSIS WITH PYTHON

MODULE 1

IMPORTING DATASETS
- Learning Objectives
- Understanding the Domain
- Understanding the Dataset
- Python package for data science
- Importing and Exporting Data in Python
- Basic Insights from Datasets

MODULE 2
CLEANING AND PREPARING THE DATA
- Identify and Handle Missing Values
- Data Formatting
- Data Normalization

MODULE 3
SUMMARIZING THE DATA FRAME
- Descriptive Statistics
- Basics of Grouping
- ANOVA
- Correlation
- More on Correlation

MODULE 4
MODEL DEVELOPMENT
- Simple and Multiple Linear Regression Model
- Evaluation Using Visualization
- Polynomial Regression and Pipelines
- R-squared
- MSE for In-Sample Evaluation
- Prediction and Decision Making

MODULE 5
MODEL EVALUATION
- Model Evaluation
- Over-fitting
- Under-fitting
- Model Selection
- Ridge Regression
- Grid Search

DATA VISUALIZATION WITH PYTHON

MODULE 1
INTRODUCTION TO VISUALIZATION TOOLS**
- Introduction to Data Visualization
- Introduction to Matplotlib
- Basic Plotting with Matplotlib Line Plots

MODULE 2
BASIC VISUALIZATION TOOLS
- Area Plots
- Histograms
- Bar Charts

MODULE 3
SPECIALIZED VISUALIZATION TOOLS
- Pie Charts
- Box Plots
- Scatter Plots
- Bubble Plots

MODULE 4
ADVANCED VISUALIZATION TOOLS
- Waffle Charts
- Word Clouds
- Seaborn and Regression Plots

Fee Structure: INR 25,000

Contact for Registration: