PYTHON DEVELOPER

This Python Course will also help you master important Python programming concepts such as data operations, file operations, object-oriented programming and various Python libraries such as Pandas, Numpy, Matplotlib which are essential for Data Science.

We fill the gap of

- ✓ Value for your time and money
- ✓ Get real employable skills that top companies want
- ✓ Technical proficiency & emerging technologies
- ✓ Project-based, active learning, skills mastery
- ✓ Learn on your schedule
- ✓ Partner with industry experts

What you will learn:

Python Specialization course and will introduce fundamental programming concepts including data structures, networked application program interfaces, and databases, using the Python programming language. You will be working on real time projects and you'll use the technologies learned throughout the Specialization to design and create your own applications for data retrieval, processing, and visualization.

1. Introduction to Python

Learn how to install Python, distinguish between important data types and use basic features of the Python interpreter, IDLE.

- ✓ 1.1. Installation of Python and Pycharm
- ✓ 1.2. Using the Python Interpreter IDLE
- ✓ 1.3. Salient Features of Python
- ✓ 1.4. Basic Syntax of Python

2. Using Variables in Python

Learn about numeric, string, sequence and dictionary data types and relevant operations while practicing Python syntax.

- ✓ 2.1. Data Types and Variables
- ✓ 2.2. Numeric Data Types
- ✓ 2.3. String Data Type
- ✓ 2.4. List Data Type
- ✓ 2.5. Tuple Data Type
- ✓ 2.6. Dictionary Data Type
- ✓ 2.7. Assignment

3. Basics of Programming in Python

Learn how to write programs using conditionals, loops, iterators and generators, functions and modules and packages.

- ✓ 3.1. Understanding Programs and Programming
- ✓ 3.2. Using Conditionals Statements(if, if..else, if..elif..else)
- ✓ 3.3. Using Loops (for, While)
- ✓ 3.4. Using Functions
- ✓ 3.5. Using Functions from Built-in Modules
- ✓ 3.6. Constructing Modules and Packages
- ✓ 3.7. Assignment

4. Principles of Object-oriented Programming (OOP)

Learn about the important features of Object-oriented Programming while using Classes and Objects, two main aspects of the OOP paradigm.

- ✓ **4.1.Overview of OOP**
- ✓ **4.2.Declaring Class and Creating Object**
- ✓ **4.3.Understanding Inheritance**
- ✓ **4.4.Assignment**

5. SEQUENCES

- ✓ **About sequences**
- ✓ **Lists**
- ✓ **Tuples**
- ✓ **Indexing and slicing**
- ✓ **Iterating through a sequence**
- ✓ **Functions for all sequences**
- ✓ **Using enumerate ()**
- ✓ **Operators and keywords for sequences**
- ✓ **The xrange () function**
- ✓ **Nested sequences**
- ✓ **List comprehensions**
- ✓ **Generator expressions**

6. DICTIONARIES AND SETS

- ✓ **About dictionaries**
- ✓ **When to use dictionaries**
- ✓ **Creating dictionaries**

- ✓ **Getting dictionary values**
- ✓ **Iterating through a dictionary**
- ✓ **Reading file data into a dictionary**
- ✓ **Counting with dictionaries**
- ✓ **About sets**
- ✓ **Creating sets**
- ✓ **Working with sets**

7. Connecting to SQLite Database

Learn about relational databases while learning how to store and retrieve data from an SQLite database through Python.

- ✓ **5.1.Introduction to SQL**
- ✓ **5.2.Creating an MySQL database**
- ✓ **5.3.Accessing MySQL Database using Python**
- ✓ **5.4.Assignment**

8. Developing a GUI with Tkinter

Learn how to create a graphical user interface using common widgets and menu systems.

- ✓ **6.1.GUI and Event driven programming**
- ✓ **6.2.Tk Designer**
- ✓ **6.3.Using Common Widgets**
- ✓ **6.4.Geometry Management**
- ✓ **6.5.Designing Menu Systems**
- ✓ **6.6.Assignment**

9. File Handling using Python

Learn file operations using python

- ✓ **7.1.Create file using Python**
- ✓ **7.2.Access file using Python**
- ✓ **7.3.Append file using Python**

10. Exception handling using Python

- ✓ **8.1.Exception handling using try..except..else**
- ✓ **8.2. Exception handling using try..finally..**

11. Networking

- ✓ **Socket**
- ✓ **9.2 Socket Module**
- ✓ **9.3 Methods**
- ✓ **9.4 Client and server**
- ✓ **9.5 Internet modules**

12. Application of Python in Various Disciplines

Learn about various resources to extend your learning for the Python programming language. Excited to learn Python