

\*\*\*\*\*

Course: 1

\*\*\*\*\*

## Python for Data Science, AI & Development

Description: Kickstart your learning of Python with this beginner-friendly self-paced course taught by an expert. Python is one of the most popular languages in the programming and data science world and demand for individuals who have the ability to apply Python has never been higher.

### Module 1 : Python Basics

description: This module teaches the basics of Python and begins by exploring some of the different data types such as integers, real numbers, and strings. Continue with the module and learn how to use expressions in mathematical operations, store values in variables, and the many different ways to manipulate strings.

### Module 2 : Python Data Structures

description: This module begins a journey into Python data structures by explaining the use of lists and tuples and how they are able to store collections of data in a single variable. Next learn about dictionaries and how they function by storing data in pairs of keys and values, and end with Python sets to learn how this type of collection can appear in any order and will only contain unique elements.

### Module 3 : Python Programming Fundamentals

description: This module discusses Python fundamentals and begins with the concepts of conditions and branching. Continue through the module and learn how to implement loops to iterate over sequences, create functions to perform a specific task, perform exception handling to catch errors, and how classes are needed to create objects.

### Module 4 : Working with Data in Python

description: This module explains the basics of working with data in Python and begins the path with learning how to read and write files. Continue the module and uncover the best Python libraries that will aid in data manipulation and mathematical operations.

### Module 5 : APIs, and Data Collection

description: This module delves into the unique ways to collect data by the use of APIs and webscraping. It further explores data collection by explaining how to read and collect data when dealing with different file formats.