Python for Data Science Training

Gain the career-building **Python skills,** and begin your journey to becoming a confident **Data Scientist**

Getting Started

Python Basics

- ✓ Your first program
- ✓ Types
- ✓ Expressions and Variables
- ✓ String Operations

Python Data Structures

- ✓ **List and Tuples**
- ✓ **Sets**
- ✓ **Dictionaries**

Python Programming Fundamentals

- ✓ Conditions and Branching
- ✓ Loops
- ✓ Functions
- ✓ Objects and Classes

Data Science Libraries for Python

- ✓ NumPy
- ✓ Pandas

About
Python for Data Science Training

Companies worldwide are using Python to gather insights from their data and gain a competitive edge. This programme focuses on Python specifically for Data Science.

Python for Data Science Training is supplemented with module presentations, demos, 100+ unit-end quizzes, 14 assignments, exercises, labs, and case studies.

This programme is designed to introduce you to the world of Python language, which is a very popular language in multiple domains like Data Science, Automation, Big Data, Artificial Intelligence, etc.

In this programme, you will learn Python and its data types, Conditional Statements & Loops in Python, File Operations in Python, and Modules & Virtual Environments. You will also learn how to work with Dictionaries & Sets in Python, and gain a deeper understanding of Python Functions. Python Classes & Inheritance, and advanced functionality using Python Classes are also covered in this programme. Also, learn basic NumPy and advanced NumPy array operations with focus on array manipulation techniques. Learn Pandas for data manipulation using Pandas dataframe and implement various important techniques like grouping data.

This programme is applied to multiple specialisations or professional certificates programmes. Completing this programme will count towards your learning in any of the following programmes:

- PG Diploma is Applied Data Science
- MSc in Applied Data Science
- PG Diploma is Machine Learning & AI

Programme **Objectives**

Write effective Python scripts

Understand Python data structures and work on them

Implement loops, if-else clause, break, pass and continue statements

Have deeper understanding of functions, create custom Python functions understanding input arguments, variable length arguments like args and kwargs

Implement lambda functions, generators, Recursion, Decorators and Closures in Python with examples

Work on read write operations on various file systems like CSV, text and JSON

Understand Objects, Classes, arguments, and importance of object oriented programming

Implement and understand special methods, with numerous built-in functions and special methods

Implement basic array operations with NumPy and advanced array operations like image manipulation, deep copies, array broadcasting and multi-dimensional array operations

Learn and work with Pandas dataframes, implement basic Pandas operations like load, add delete etc and advanced Pandas operations like handling missing data, join operations with relational databases
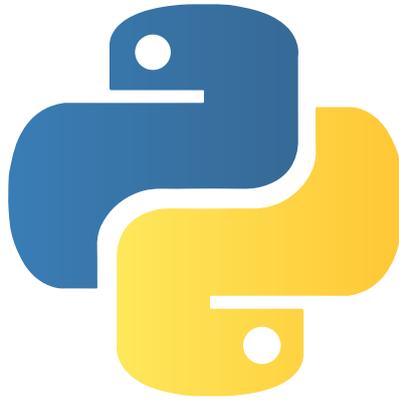
Programme **Advantages**

32 hours of instructor-led live sessions

Gain hands-on experience

GP Education will certify you as a Python for Data Science Professional after successfully completing the programme

GP Education Alumni membership to be a part of the network of future Python for Data Science Professionals
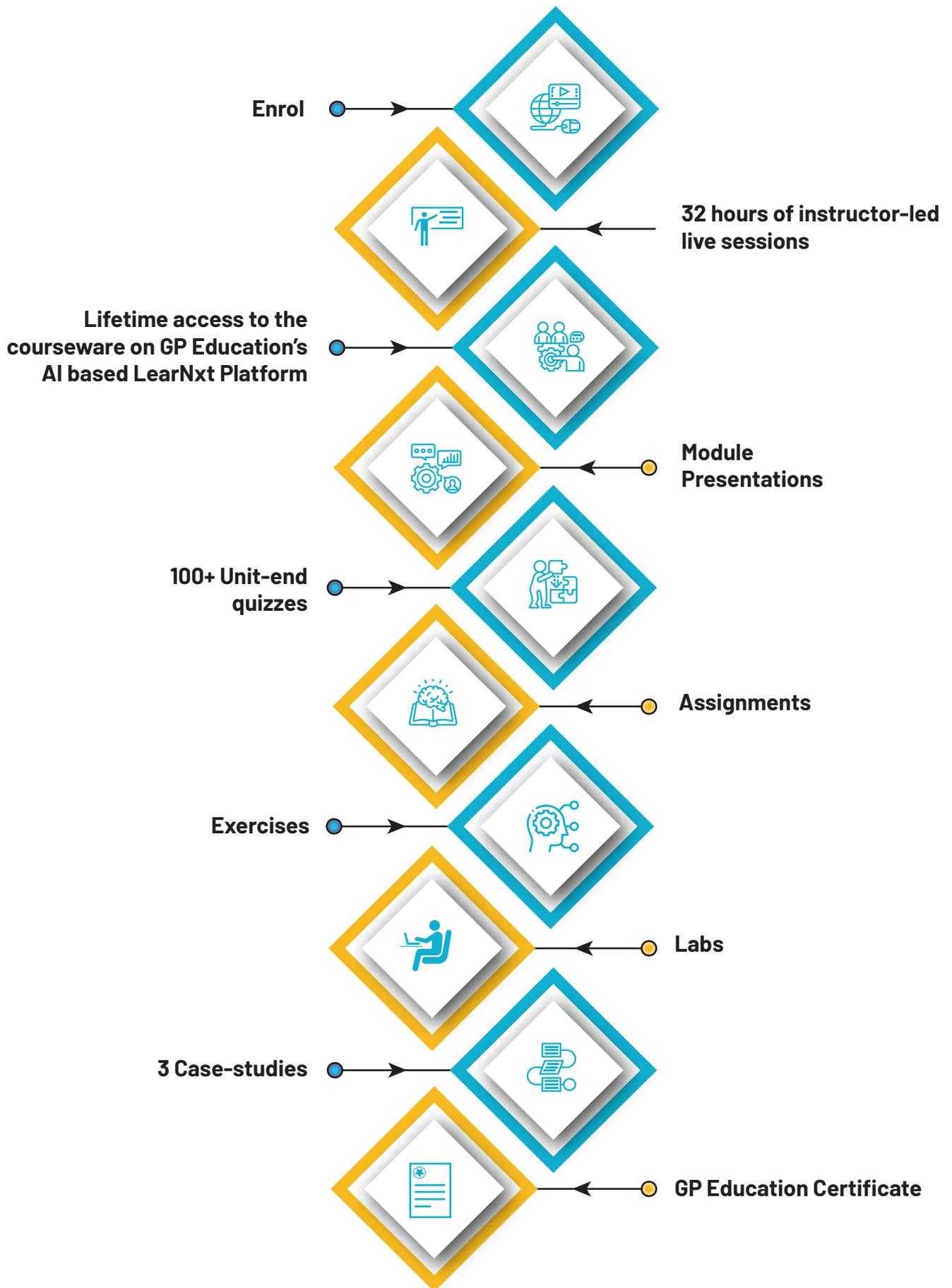
Lifetime access to program on GP Education's AI based LearNxt Platform

- Module Presentations
- 100+ Unit-end quizzes
- 14 Assignments
- Exercises
- Labs
- 3 Case-studies

Learning **Journey**

Enrol

32 hours of instructor-led live sessions

Lifetime access to the courseware on GP Education's AI based LearNxt Platform

Module Presentations

100+ Unit-end quizzes

Assignments

Exercises

Labs

3 Case-studies

GP Education Certificate

Programme **Curriculum**

MODULE NAME	TOPICS
Getting Started with Python: Introduction and Python Data Types	To get started with Python and install necessarynpackages on an operating system. Understand basic operations on data structures like Lists and tuple
Complex Data Types in Python: Working with Dictionaries & Sets in Python	Introduction to Dictionaries and sets in Python, and understanding functions, methods related to basic data structure in Python
Conditional Statements & Loops: If-else and for loop Control Structures in Python	Introduction to Python conditional statements like if-else clause and for loop with all major data structures like List, Tuple, Dictionary and Set
Conditional Statements & Loops: Advanced Operations for Loops and While Loop in Python	Advanced conditional statements with advanced methods, operations on for loop and while loop, case studies with break, continue and pass loop control statements
Functions in Python: Introduction	Introduction to functions in Python, create custom Python functions understanding input arguments, variable length arguments like args and kwargs
Functions in Python: Gaining a Deeper Understanding of Python Functions	Advanced Python functions with variable types, lambda functions, generators, Recursion, Decorators and Closures in Python with examples
Advanced Python Topics: File Operations in Python	Understand read write operations on various file systems like CSV, text and JSON, using few resources in Python
Advanced Python Topics: Modules & Virtual Environments	Introduction to virtual environment and module customization in Python, Understand, create, activate and work on virtual environment in Python
Python Classes & Inheritance: Introduction	Introduction to Python classes and Inheritance, Understanding Objects, Classes, arguments, and importance of object oriented programming
Python Classes & Inheritance: Getting Started with Classes in Python	Working with Python classes with class variables, instance variables, getter and setter functions, private variable creation in Python
Python Classes & Inheritance: Working with Inheritance in Python	Understanding inheritance from object base class, its methods and techniques, understanding inheritance, polymorphism
Python Classes & Inheritance: Advanced Functionality Using Python Classes	Implement and understand special methods, with numerous built-in functions and special methods
Python - NumPy for Multi-dimensional Data & Advanced operations	Understand and Implement Array manipulation and techniques like splitting, reshaping etc
Pandas DataFrame ,Manipulating & Analysing Data	Implement pandas to analyse and manipulate datasets with pandas dataframes and advanced operations

Case-**studies**

Case Study 1	Generate Parts-of-speech (POS) tags using Python
Case Study 2	Semantic similarity of texts using Python
Case Study 3	Text Summariser application using Python

Career **Opportunities**

Python programming language is currently the most popular language in Data Science domain.

By learning Python for Data Science, following job profiles are available in the market:
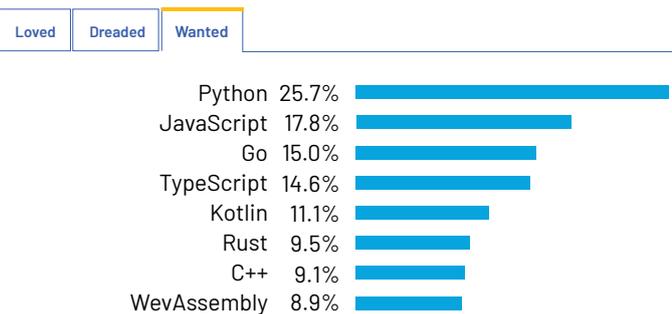
Python Developer

Software Engineer

Career Opportunities

Software Developer

Research Analyst

Why **Python for Data Science Training?**

- Python is a great choice for beginner programmers because of its simple library, flexible syntax and huge community support

- Python programming language runs on any platform, ranging from Windows to Linux to Macintosh

- Python is widely used in web development, writing scripts, automating tasks, data science, robotics, big data and even cybersecurity, due to its ease of use and ability to support numerous frameworks

- The average Senior Python Programmer salary in the USA is $127,217 per year – Indeed.com

- According to SlashData, there are 8.2 million developers who use Python in the world

- Industry big players - Google, YouTube, Facebook, IBM, NASA, Dropbox, Yahoo, Mozilla, Quora, Instagram, Uber and Reddit use Python for a wide range of purposes and are continuously on the lookout for Python engineers

---

👍 **Most Loved, Dreaded, and Wanted**

Most Loved, Dreaded, and Wanted Languages

Loved	Dreaded	Wanted

Python	25.7%	
JavaScript	17.8%	
Go	15.0%	
TypeScript	14.6%	
Kotlin	11.1%	
Rust	9.5%	
C++	9.1%	
WevAssembly	8.9%	

Source: Developer Survey by StackOverflow

Admissions

Who is this programme for?

Python for Data Science Training is a good fit for the below professionals:

- Beginners who have never programmed and aspire to learn Python
- Programmers switching languages to Python
- Intermediate Python programmers who want to level up their skills
- Developers
- Statisticians and Analysts
- Business Analysts
- Project Managers
- Business Intelligence Managers
- Technical Leads
- Architects
- Data Analysts
- Data Scientists

Programme Fee

Contact us for best offers and discounts

About SRM Group

SRM Group of Institutions is acclaimed as one of the leading educational groups in India with over 70,000 students and 4,500 faculty members. It is a parent organisation to three universities, four campuses, and four institutes. All these colleges and universities offer a wide range of UG, PG and PhD courses in the field of Engineering, Management, Medicine & Health Sciences and Humanities

SRM Group Universities and Institutes

About GP Education

GP Education is an SRM Group initiative with a vision to create a global online learning company enabling people to achieve their dreams through learning.

GP Education provides learning products, solutions and services by leveraging high quality intellect hand-picked across the globe. The rigorous curriculum and content are created and curated with deep understanding of industry and individual learning needs. The most innovative learning and teaching experiences are orchestrated over state of the art brick and click infrastructure with a strong intent to measure and report learning outcomes.

"
ENROL NOW FOR THE UPCOMING BATCH

📞 +91 9739459670

✉️ admissions.python@gpeducation.org

🌐 https://online.gpeducation.org/cert/python.php

Green Pearl
EDUCATION

15 - 16 Vayudooth Chambers, 10th – 11th floor, MG Road, Bangalore 560001.