Mastering Data Science:

Unleashing Insights with Python

SevenMentor PVT.LTD

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DATA SCIENCE WITH PYTHON

Course Mission

SevenMentor Institute leads the way in providing cutting-edge IT Training and Skill Development across India. We have strived to establish an ideal learning atmosphere at all our training centers. We prepare our students to become dependable future professionals. Our institute aspires to promote universal access to learning for students. To achieve our mission of promoting better learning we invite all students to enroll in our Data Science with Python Course. Join us today to make a fulfilling career in Data Science with Python

DATA SCIENCE WITH PYTHON STATISTICS:

INDUSTRY INSIGHTS

80% Companies will use some form of Data Science with Python based Application

77% Year on Year Growth For All Data Science with Python Jobs

LEARN DATA SCIENCE WITH PYTHON AND BE IN DEMAND ALWAYS!

Data Science with Python, the digital voyage where coding meets discovery, is the gateway to unraveling the mysteries hidden within data. Imagine it as the Swiss Army knife for data scientists, enabling you to explore, transform, and extract insights from vast datasets with elegance and efficiency. It's the driving force behind predicting future trends, making datadriven decisions, and powering groundbreaking innovations across various industries. In the realm of data science with Python, data becomes your raw material, and Python is your sculptor's tool, shaping data into actionable knowledge and illuminating the path to innovation.

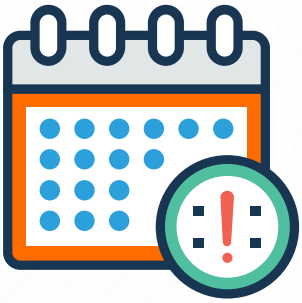
Mastering Data Science:
Unleashing Insights with Python

Embarking on a transformative journey into the realm of Data Science with Python opens up a world of boundless possibilities, where the relentless pursuit of knowledge serves as the compass navigating you through the dynamic landscape of data exploration and analysis. Data Science with Python stands out for its versatility and widespread applicability across various domains, providing practitioners with the tools to craft innovative, forward-thinking solutions that have the potential to reshape industries and drive meaningful change.

Be Prepared For Every Scenario!

Gain practical Data Science with Python experiences through well designedcourses, latest tools and excellent teachers.

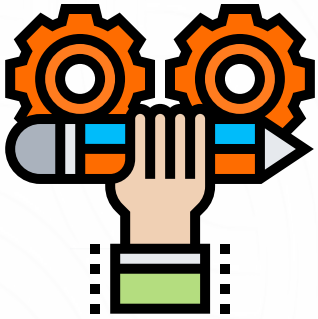
Experienced Faculty



Flexible Scheduling

Hands-On Learning

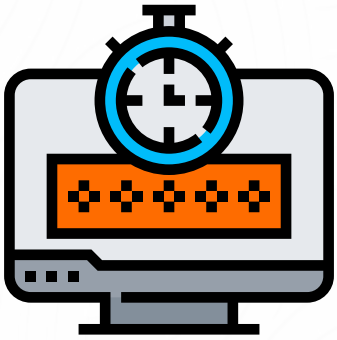
Mock Interview Sessions



Real-World Projects

Career Support

Comprehensive Curriculum



Lifetime Access

PYTHON

Introduction

- What is Python and history of Python?
- Installing Anaconda, Jupyter Notebook
- First Program
- Python Identifiers, Keywords and Indentation
- Comments
- Getting User Input
- Python Data Types
- What are keywords
- What are variables?
- Python Inbuilt Functions

Control-Flow Statements:

- if-else
- Elif
- While loop
- For loop
- Range Function
- Break
- Assert
- Pass
- Return
- Coding Assignment

Data Structures:

- What are Data Structures?
- Lists in Python
- Code Walkthrough on Lists
- Understanding Iterators
- Tuple in Python
- Code Walkthrough on Tuple
- Dictionaries in Python
- Code Walkthrough on Dictionaries
- Sets in Python
- Code Walkthrough on Sets
- More examples on Data Structures

Functions:

- What are functions in Python?
- Defining and Calling Functions
- Inbuilt Functions
- User Defined Functions
- Lambda Function
- Split Function
- Strip Function
- Map Function
- Filter Function
- Format Function
- Code Walkthrough on User Define Functions
- Regular Expressions Basics

Object Oriented Programming:

- Why do we need Object-Oriented Programming?
- What is a class?
- What is an object?
- What is Self?
- Constructors
- Global and local variables
- Static and Dynamic Variables
- Abstraction
- Inheritance
- Encapsulation
- Polymorphism
- Code Walkthroughs on OOP

Exception Handling and GUI :

- Why do we need to handle exceptions?
- Errors in Python
- Compile-Time Errors
- Runtime Errors
- What is Exception?
- try....except...else
- try-finally clause
- Raising an exceptions
- User Defined Exceptions
- Graphical User Interface in python
- Tkinter
- Button Widget ,Label Widget and Text Widge

Miscellaneous Topics :

- SQL connection with Python using SQLITE Library
- Multi-Threading and Multi-Processing
- Introduction to Web-scraping
- Beautiful Soup Library
- Numpy Library for Data Analysis
- Code Walkthrough On Numpy Library
- Pandas Library for Data Analysis
- Code Walkthrough On Pandas Library
- Matplotlib Library for Data Analysis
- Code Walkthrough On Matplotlib Library
- Revision Sessions
- Assignment Discussions

Project Discussion:

- Defining the Business Problem
- Constraints
- Flow Diagram
- Libraries Used
- Results and Conclusion
- Future Scope
- References

SQL

Introduction:

- What is SQL?
- Why do we need SQL?
- What is DataBase Management System?
- Types of DBMS
- Execution Of SQL query
- Difference Between SQL and MYSQL
- Introduction to MySQL
- Installation of MySQL server
- Download sample database
- Load sample database to work

Basic SQL Keywords:

- Basic SELECT Statement
- Limit/Offset
- OrderBy
- Distinct
- Where
- Comparison Operators
- Null
- Logical Operators
- Aggregate Operators(Count, Max, Min, Avg, Sum)
- Group By
- Having
- Order Of Keywords
- Wildcard Operators

JOINS:

- What are Joins?
- Inner Join
- Quter Join
- Left Join
- Right Join
- Self Join
- SubQueries/NestedQueries /Inner Queries
- Triggers
- Stored Procedures

DML/DDL

- DML.:Insert
- DML.:Update, Delete
- DDL:Create Table
- DDL.:Alter:Add,Drop,Modify
- DDL.:Drop Table, Truncate,Delete
- DCL:Data Control Language: GRANT,REVOKE

Probability And Statistics

Introduction

- Why do we need to learn Probability and Statistics?
- Descriptive Statistics
- Central Tendency(Mean/Median/Mode)
- Deviation(Standard Deviation/Variance)
- Population and Sample
- Distributions
- Why do we care about Distributions?

Distributions and Various Tests:

- What is Random Variable?
- Discrete and Continuous Random Variable
- Normal Distribution/Gaussian Distribution
- PDF and CDF of Gaussian distribution
- Uniform Distribution
- Q-Q Test
- K-S Test
- What is Sampling?
- Types of Sampling

Inferential Statistics:

- Correlation Vs Causation
- Hypothesis Testing
- Confidence Interval
- Permutation Resampling Test
- A/B Testing

Case Studies/Project:

- Case Study-1
- Case Study-2
- DataScience-1
- Machine Learning

Industry Case Studies

- Case Study-1
- Case Study-2
- DataScience Vs DataAnalysis Vs MachineLearning Vs DeepLearning
- Introduction to Numpy, Pandas, Sci-kit Learn and Matplotlib Library
- Importing data from different Sources

Basic Terminologies and Basic Maths:

- Traditional Programming Vs Machine Learning
- Types of Machine Learning Problems
- Supervised and Unsupervised Learning
- Classification and Regression
- Overfitting and Underfitting
- What is a point and a Vector?
- Distance between 2 points, Distance between point and a line.
- Equation of a line, Equation of a Plane, Equation of a hyper plane.
- Dot product and Projection of one vector onto another.
- Basics of Differentiation
- KNN(K nearest Neighbour) Algorithm
- Geometric Intuition of KNN
- Mathematical Intuition of KNN
- Limitations of KNN
- What are Hyper-parameters?
- Hyper-parameters Tuning
- Why do we need Cross-Validation?
- Code Walkthrough on KNN

Supervised Learning Continues:

- Naive Bayes algorithm
- What is Conditional Probability
- What is Naive about Naive Bayes?
- Geometric Intuition of Naive Bayes
- Mathematical Intuition of Naive Bayes
- Limitations of Naive Bayes
- Hyperparameter Tuning in Naive Bayes
- Code Walkthrough of Naive Bayes
- Introduction to Logistic Regression
- Geometric Intuition of Logistic Regression
- Mathematical Intuition of Logistic Regression
- Why do we need sigmoid function?
- Regularisation(L1 and L2)
- Limitations of Logistic Regression
- Code Walkthrough of Logistic Regression

Supervised Learning Continues:

- Introduction to Linear Regression
- Geometric and Mathematical Intuition
- Assumptions of Linear Regression
- Limitations of Linear Regression
- Code Walkthrough of Linear Regression
- Optimisation Theory
- Convex and Non Convex Functions
- Gradient Descent
- Stochastic Gradient Descent
- Introduction to SVM(Support Vector Machines)
- Geometric Intuition
- Mathematical Intuition
- Hard and Soft SVM
- Kernalisation in SVM(Radial Basis Function)
- Limitations of SVM
- Code Walkthrough of SVM

Decision Tree and Ensembles :

- Decision Tree
- Geometric Intuition of Decision Tree
- Mathematical Intuition of Decision Tree
- Entropy and Gini Impurity
- Information Gain
- Limitations of Decision Tree
- Code Walkthrough of Decision Tree
- What is Ensembles
- Bagging and Boosting
- What is Ensembles?
- Bagging and Boosting
- Concept of Bootstrapping
- Introduction to Random Forest
- Variance and Bias
- Geometric Intuition of Random Forest
- Why Random Forest is so famous?
- Code Walkthrough of Random Forest
- Performance Metric and Different

Situations in Supervised Learning :

- Accuracy
- Why Accuracy as a metric will fail in most of the real world cases?
- Precision and Recall
- F1 Score
- Confusion Matrix
- Log-loss
- ROC-AUC Curve
- RMSE(Root Mean Square Error)
- R2(Coefficient of Determinant)
- MAD(Median Absolute Deviation)
- How to Handle Outliers in the data?
- How to deal with the imbalance data?
- How to handle categorial data?
- Scaling of Features
- Curse of Dimensionality

Unsupervised Learning and Dimension Reduction:

- What is Unsupervised Learning?
- What is Clustering?
- K-Means Clustering
- Hierarchal Clustering
- Why Dimensions Reduction?
- PCA(Principle Component Analysis)

Machine Learning Project :

- Business Problem
- Contraints
- Data Collection
- Formulate Business Problem to Machine Learning Problem
- Data Cleaning
- Data Preprocessing
- EDA(Exploratory Data Analysis)
- Modelling
- Evaluating the Performance of the models
- Retrain if necessary
- Deployment
- Artificial Intelligence With Deep Learning

History of Neural Networks:

- Who invented Neural Network?
- What is the intuition of a Neural Network?
- What is a perceptron?
- Connecting Logistic Regression, Linear Regression with Perceptron
- Multi Layer Perceptron
- Training of a Perceptron
- MLP and Backpropogation)
- Notation
- Training a MLP:Chain Rule
- Training a MLP:Memoization
- Back propogation
- Activation Functions
- Sigmoid
- Tanh
- RELU
- Vanishing gradient

Deep Multi LayerPerceptrons :

- Dropout and Regularisation
- Batch Normalisation
- Batch SGD with Momentum
- Adam
- Softmax and Cross-Entropy
- How to train Deep MLP?
- Tensorflow and Keras Overview
- Install Tensorflow
- Softmax Classifier on MNIST data
- Code Walkthrough of MLP
- Hyperparameter Tuning in Keras

Introduction to CNN Continues :

- AlexNet
- VGGNet
- Residual Network
- Inception Network
- What is Transfer Learning?
- Code Walkthrough of CNN

Introduction to CNN(Convolution Neural Network)

- What is Convolution?
- (Convolution:Padding and Strides
- Convolution over RGB images
- Max Pooling
- CNN Training

Introduction to RNN :

- Why RNN(Recurrent Neural Network)?
- Training RNN
- Types of RNN
- Need of LSTM
- |. STM(Long Short Term Memory)
- Deep RNN
- Bidirectional RNN
- Code Walkthrough of RNN

Introduction to NLP :

- What is NLP(Natural Language Processing)?
- BOW(Bag of Words)
- Text Preprocessing: Stemming and Lemmatisation
- Stop Word Removal
- Tokenisation
- Unigram, Bigram, Ngrams
- TF-IDF
- Weighted TF-IDF
- Word2Vec(W2V)
- Code Walkthrough of NLP Techniques

Deep Learning Project :

- Business Problem Contraints
- Data Collection
- Formulate Business Problem to Deep Learning Problem
- Data Cleaning
- Data Preprocessing
- EDA (Exploratory Data Analysis)
- Feature Extraction
- Modelling
- Evaluating the Performance of the models
- Retrain if necessary

Get Skills To Fulfill Every Role:

Every student at **SevenMentor** gets personalized guidance, Mentorship, and ample opportunities to address individual questions and concerns. All our sessions are designed to be engaging, interactive, and tailored to your learning pace, ensuring you grasp each concept with clarity.

Nishesh Gogia

He is passionate about cutting edge technologies in Machine Learning and AI.He is also leading the Project Team and has implemented a chatbot for the company.He is a student of IIT Madras.

Aniket Kulkarni

He have theorotical as well as practical experience in the field of ML. I did M Tech and have 10+ years of Industrial and Academic experience.
Currently working as Data Science Trainer.I have trained 2000 + professionals and students for the course of Python, SQL, Power BI, Machine Learning and Deep Learning.

Suraj Kale

He is experienced With an extensive 8+ year track record, he stands as a seasoned Data Scientist. His expertise lies in delivering all-encompassing training encompassing data analytics, machine learning, and statistical modeling for professionals. Renowned for his knack for unraveling intricate concepts, nurturing practical skills, and propelling learners to excel in the data-dominated corporate realm.

Sagar Gade

Working as a Data Science Trainer. Has been actively involved in the training sessions with Data Science Aspirants. I have trained more than 300+ professionals and students in Python, SQL, Django, Probability & Statistics, Machine Learning and Data Science. My Total Experience is 2+ years in Python and Data Sci. related areas. Junior Python and Data Analytics post work experience as well as Python Machine Learning Applications.

Karishma Pawar

Karishma holds a PhD in Computer Engineering, specializing in cutting-edge fields including Artificial Intelligence and Machine Learning. In addition to more than 8 years of experience in Data Science, remarkable publications in peer-reviewed journals and conferences are to her credit. She has previously worked with Avaya and Infosys, and demonstrated a commitment to advancing the frontiers of knowledge.

Get Skills To Fulfill Every Role:

Our **Data Science with Python** Courses are designed for a wide range of people looking for skills and opportunities across all major **IT** sectors

Hands-On Projects: Gain practical experience by working on real-world projects, building a robust portfolio that will impress potential employers.

Flexibility: Our flexible schedule options allow you to learn at your own pace, making it perfect for both beginners and experienced developers looking to upskill.

Career Support: We're dedicated to your success! Benefit from career guidance, resume building, interview prep, and job placement

Community: Join a vibrant community of like-minded learners, where you can collaborate, share ideas, and network with peers.

Our Students are at reputed Tech Companies

BAJAJ FINSERV · GT FINANCIAL SERVICES · INFERYX · STRELEMA · pivotchain · LONAR TECHNOLOGIES

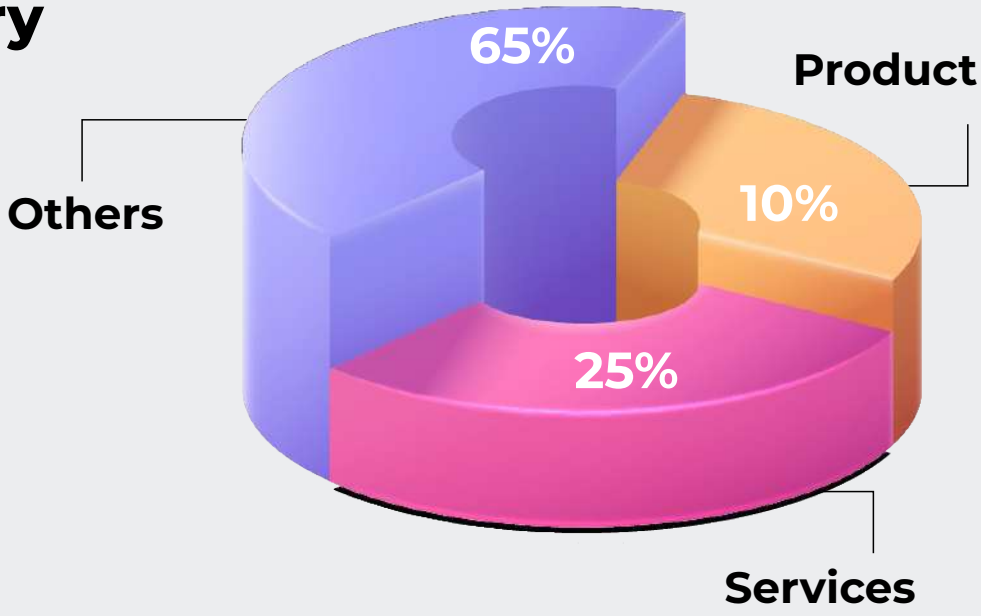
Simplify Healthcare · OMFYS · Scymes · KALA Genset Source of Power · Altum Credo Home Finance · INFOWORLD THE SOFTWARE PEOPLE

NABLA INFOTECH · Circulants · SRV media Insights | Ideas | Impact · Rabbit & Tortoise TECHNOLOGY SOLUTIONS · NIMAP INFOTECH FOCUS TO REDEFINE · Integs Cloud

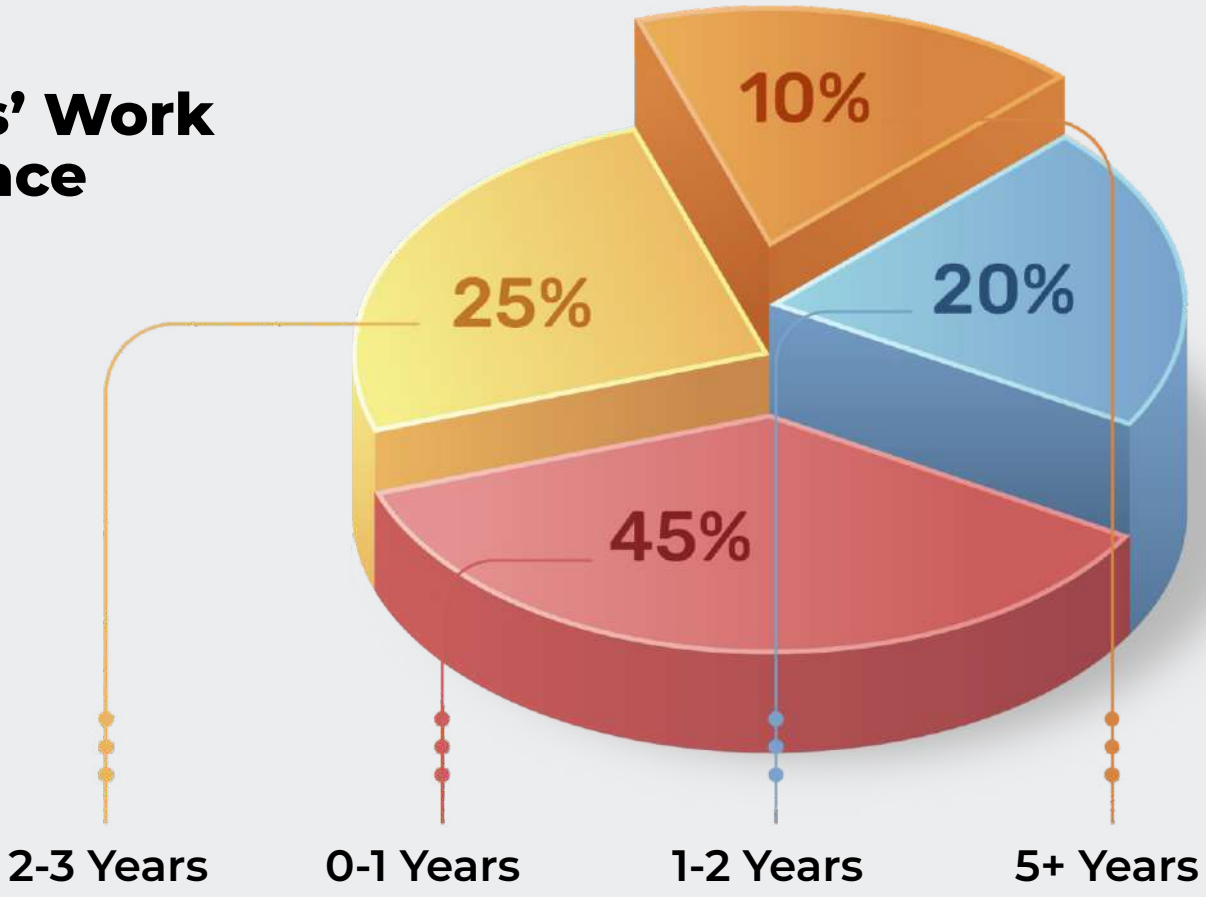
DATA SCIENCE WITH PYTHON
JOBS ARE ALSO VERY STABLE!

The demand for **Data Science with Python** professionals is growing rapidly, so there is a lot of job security in this field. This can be a great motivator for people who are looking for a stable career.

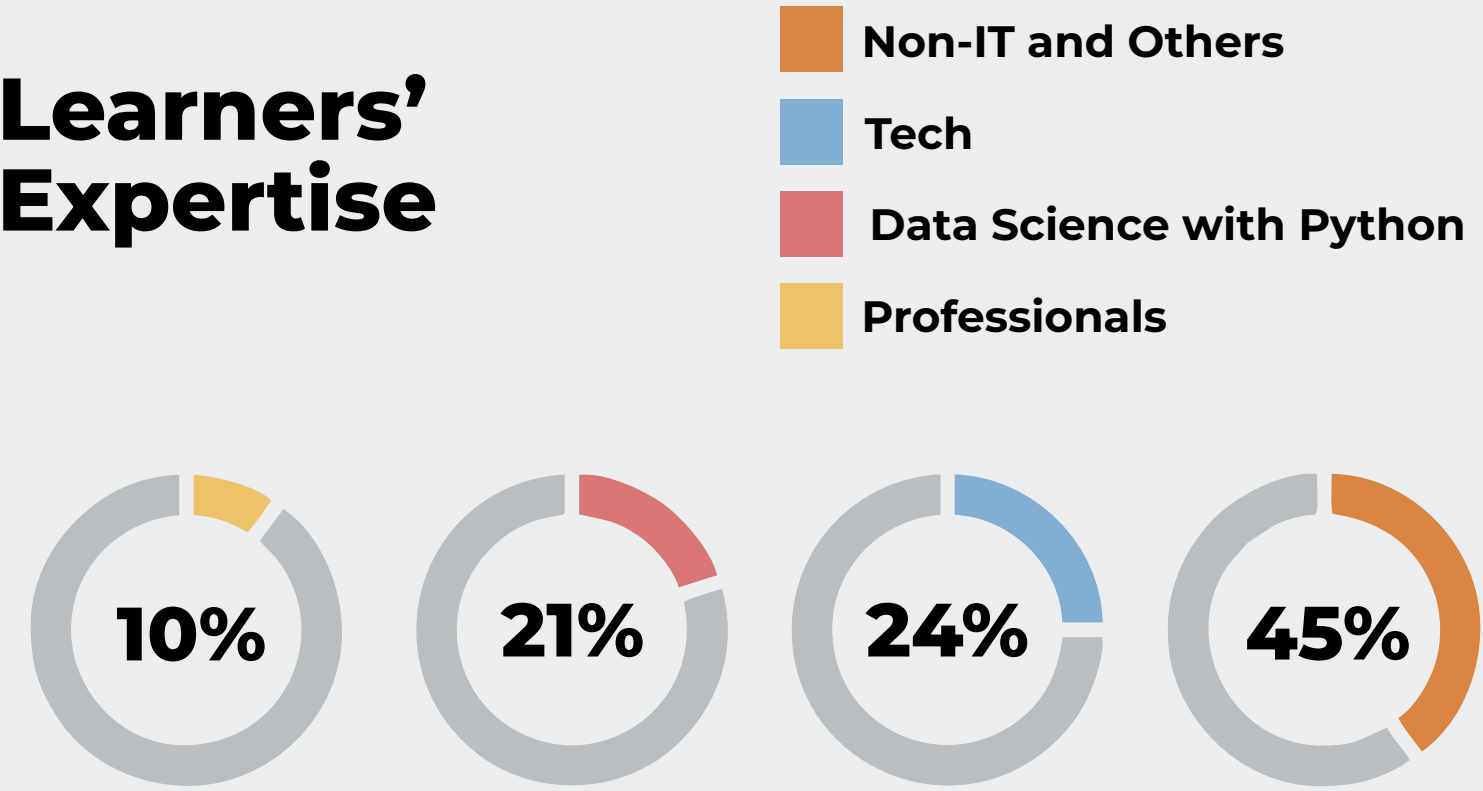
Learners' Industry Background



Learners' Work Experience



Learners' Expertise



BOOST YOUR CAREER TO NEW HEIGHTS:

The global Data Science with Python job market is expected to grow by 44% from 2021 to 2030, creating 3.5 million new jobs.
In India it is expected that 309,000 new Data Science with Python jobs will be available by 2030, accounting for 9% of the global demand. The average salary for an Data Science with Python professional in India is approximately Rs. 09 to Rs. 11 Lakhs per annum.

Affordable Training without Compromise:

SevenMentor understands that investing in your education is a significant decision. Therefore, we provide the most affordable fee structure for our Data Science with Python course. We also offer flexible fee payment options and have discounts and offers available from time to time. We also accept all modes of payments such as cash, cards and UPI.

Before enrolling you can also schedule one demo training session at no cost. You can contact us for the demo session or detailed fee structure.

HOW TO START YOUR CAREER IN DATA SCIENCE WITH PYTHON

- Enroll at **SevenMentor Institute**
- Get hands-on training from **Experienced Teachers**
- Receive Industry-recognized **Data Science with Python Certification**
- Work for leading **MNCs** through our **on-campus interviews**

WE ARE THERE FOR YOU

If you are interested in learning more about Data Science with Python training, please contact us. Our team would be happy to answer any questions you have and help you find the right

Request For Call Back

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