datamantra

Python Mastery
Let's automate & build the Models

Master Python: "Transform Ideas into Reality with Code"

We just need your **30 hours** from your life..

15000+ Happy Students

Best in Online & Offline Training Experience

Industry Recognized Expert Mentors

Program Curriculum

Lesson 1

Introduction to Python Basics -   6 hours

- Introduction to Python (History & Usage)
- Data Types in Python (Int, Boolean, Strings)
- Maths in ALU (Division, Addition & Multiplication)
- User Input & String Functions (Len, Lower, Upper)
- Variables & their memory allocation
- Control Flows (if, elif, else)
- Conditional Loops (for, while & Nested If)
- Indexing & Slicing the Strings

Lesson 2

Introduction to Functions & List Comprehensions - 4 hours

- What are Functions?
- Types of functions (built-in, user-defined, anonymous)
- Creating your own function (def)
- Local vs. global scope
- Lambda Function (Anonymous Function)
- Map, Filter & Reduce functions
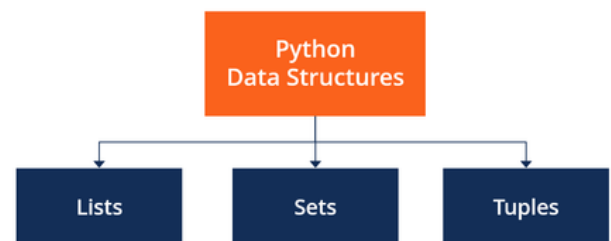- List comprehensions & Its structure & simple Example

Lesson 3

Data Structures in Python -   4 hours

- What are Data Structures?
- Overview of Python's built-in data structures
- Importance of choosing the right data structure
- Linear Data Structures
- Lists: Creating lists, Accessing and modifying elements
- List methods and operations
- Tuples: Creating tuples, Accessing elements, Immutability and its implications
- Tuple methods and operations
- Sets: Creating sets, Adding and removing elements
- Set operations (union, intersection, difference)
- Dictionaries : Creating dictionaries , Accessing and modifying values
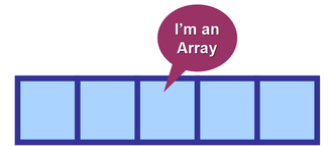- Dictionary methods and operations

Lesson 4

All about Numpy - Numerical Python   -   6 hours

- Introduction to NumPy arrays (creation- np.array())
- 1-D, 2-D, 3-D Arrays & Use cases in Python
- Array attributes (shape, size, dtype, etc.)
- Built-in Functions for Array Creation (np.zeros(), np.ones(), np.arange(), np.random)
- Array operations and broadcasting (Addition, multiplication, etc.)
- Accessing elements in Arrays & Negative indexing
- Multidimensional array indexing
- Reshaping Arrays (reshape(), flatten(), ravel())
- Aggregation Functions - (sum(), mean(), std(), min(), max())
- Correlations and Covariance - (corrcoef(), cov())
- Random Number Generation   np.random.rand(), np.random.randint()

Lesson 5

All about Pandas dataframes   -   6 hours

- Introduction to Pandas DataFrames and Series
- Read excel, csv & connect to sql (pd.read_csv)
- Inspecting DataFrames .head(), .tail() , .info(), .describe(), .shape
- DataFrame Attributes and Methods .shape, .columns, .index, .dtypes, .values
- Indexing with loc and iloc
- Making a conditions columns (if/ else or by lambda function)
- Filtering data with conditions (np.where)
- Combining multiple conditions
- Data Cleaning techniques - Fillna, isna, dropna, drop_duplicates()
- Data Transformation & Preparation (df.rename(), astype, pd.to_datetime()
- Returning a new DataFrame - Understanding the inplace parameter
- Data manipulation with Pandas Selecting columns, rows
- Grouping data with groupby()
- Aggregating data (sum, mean, count, etc.)
- Applying custom aggregation functions
- Concatenating & Merging DataFrames (.merge, .join, .concat())
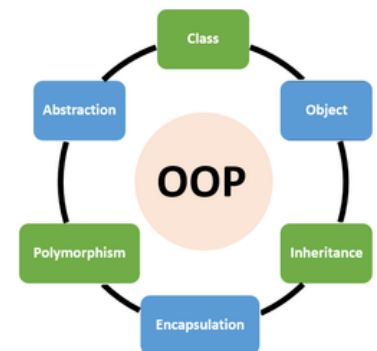
Program Curriculum

Lesson 6

Introduction to Matplotlib & Seaborn - 4 hours

- What is Matplotlib?
- Importance of data visualization
- Plotting simple lines and points
- Customizing Plots - Adding titles, customizing axes and labels, Adding legends)
- Basic plot functions (plot(), scatter(), bar(), Histograms, Heatmaps etc.)
- Box & whisker Plot (Stats Plot)
- Creating multiple plots in a single figure (plt.subplot() and plt.subplots())
- Overview of Seaborn & Plotly for Interactive visualizatons
- distplot(), kdeplot(), rugplot()
- 3D Plots

Lesson 7

Introduction to OOPs - 3 hours

- Introduction to OOP
- Classes and Objects - Defining classes, Creating objects
- Encapsulation - Access modifiers: Public, Private, Protected
- Inheritance - Base and derived classes & Multiple inheritance
- Polymorphism - Method overriding
- Abstraction - Abstract classes (abc module)
- Real-world OOP examples (e.g., Banking system, E-commerce platform)

Its time to showcase what you have learnt so far..

- **EDA Exercise: Analyzing a Dataset**
- **NumPy Exercise: Array Manipulations**
- **Pandas Exercise: DataFrame Manipulations**
- **Matplotlib Exercise: Data Visualization**

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OUR TESTIMONIALS

Pooja Patel
1 review

★★★★☆ 5 days ago **NEW**

Under Tarun's guidance, I had learn SQL, and his explanations are exceptionally clear. If you're keen on mastering SQL concepts, I highly recommend considering DataMantra.

Shubham Parashar
59 reviews · 22 photos

★★★★★ a week ago **NEW**

I have taken online training on SQL from Data Mantra. Course content is very relevant and practicals focused. Trainer is well versed in industry requirements thus training imparted is good to start working on industry projects.

arpit sharma
3 reviews

★★★★★ a week ago **NEW**

Participating in Data Mantra Course was truly enriching. The curriculum was meticulously designed, encompassing crucial concepts and techniques essential for excelling in SQL and Tableau, Alteryx, python, power bi. Mr. Tarun, the instructor, demonstrated exceptional expertise and offered outstanding support throughout the course.

Vishal Kumar
2 reviews · 13 photos

★★★★★ a week ago **NEW**

Learning SQL from datamantra is such a great experience.

Neelesh Gupta
9 reviews

★★★★★ 4 days ago **NEW**

Tarun hands on experience in machine learning is biggest advantage for students learning from him , he explain the concepts in depth and make sure to resolve each and every doubt of his students , I will refer him to increase your ML understanding

N **Naman Singh**
4 reviews

★★★★★ a week ago **NEW**

It was an incredibly enriching experience with Data mantra. The curriculum was well-structured and comprehensive, covering all the essential concepts and techniques needed to excel in both SQL and Tableau. The instructor Mr. Tarun were highly knowledgeable and provided excellent support throughout the course.

Vineet Raina · 1st
Business Analyst at CandorWorks | Certified Business Analys...
1yr ·

It gives me immense pleasure to share that I have graduated from the Master's Program in Business Analysis from Simplilearn by completing all the mandatory courses which were part of the curriculum.
I thank Simplilearn and my course instructors Vaibhav Pandey, Tarun Sachdeva & Vaibhav Rajvanshi for conducting the training.

A **Aditi Nath**
1 review

★★★★★ a week ago **NEW**

I had a great experience studying SQL at Data Mantra, especially with the teaching style of Tarun sir. The curriculum is exceptionally easy to grasp, and unique teaching method makes it even simpler to comprehend concepts ranging from basic to advanced levels. He use of real-life examples enhances understanding and real life application. Highly recommended for anyone looking to master SQL effectively💯.

Kumar Saurav · 1st
Data Analyst
8mo ·

I'm bursting with excitement to share that I've just completed the Complete SQL Mastery offered by Jobaaj Learnings.
This course was packed with valuable information. Thankyou Jobaaj Learnings and Tarun Sachdeva for providing this wonderful course.

Vaibhav Srivastava · 1st
Aspiring Data Analyst | Advanced Excel, Python, SQL , Googl...
7mo ·

Dear Friends very happy on sharing this Gold Badges in Hacker Rank SQL

Very very thanks to Rakshit Vig Sir and Tarun Sachdeva Sir for making such kind of value for me

CERTIFICATE OF ACHIEVEMENT

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CERTIFICATE

OF ACHIEVEMENT

PROUDLY PRESENTED TO

Name Surname

HAS SUCCESSFULLY COMPLETED THE ONLINE COURSE

Python Mastery

He/She has excelled at Python Mastery by successfully completing all the assignments & modules associated with the program.

BEST AWARD

AUTHORIZED SIGNATORY

DATE:

ISO 9001

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MEET YOUR TUTOR

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Tarun Sachdeva

AI & Data Science Consultant

Founder DataMantra, Instructor
LinkedIn

I am based out of **Belgium**, working as Freelancer across the world as I completed my post graduation **MSc in Data Science and AI from Top College of Europe** - **EDHEC Business School, France,** and I love to make new relationships across the world. In the meantime, I love to write about my travel experiences and blogs on Medium.

With nearly **10 years** of diverse professional experience spanning the Finance, Manufacturing, Retail and Telecom sectors, I have honed my skills and expertise in various aspects of data analysis.

Being **ML & Python** my first love, I am an expert in extracting and transforming data efficiently through **SQL** and utilising ETL tools like Alteryx. Furthermore, I have great knowledge of **Tableau & Deep Learning algorithms** too.

My recent role was **Senior Financial Data Analyst in Credit & Risk Controllership at American Express**. I am a Freelancer now and love to teach the students.

Are you ready to take the next step in your career and join our hands-on training program?

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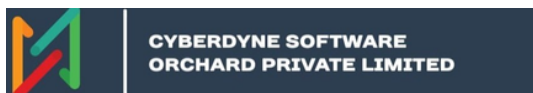
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OUR VISION

Help & Guide students globally with innovative, personalized education for empowered learning and especially in changing the Domain.

OUR MISSION

Empowering individuals worldwide, our mission is to provide accessible and top-quality education, fostering skills that drive career success and personal growth.

OUR STORY

Our story is one of dedication to shaping futures, breaking barriers, and creating a dynamic and easy learning environment for every student and Corporate professionals

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33-745537561 - France

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