
DATA SCIENCE SYLLABUS**Module 1: Introduction to Data Science & Logic Building (2 Hours)**

- What is Data Science?
- Real-world examples (e.g., weather, stock, sports analytics)
- Programming logic with C/C++: Conditionals, Loops, Data Types
- Trainer-led examples: Simple calculations & logic building

Module 2: Python for Data Science (6 Hours)

- Python basics: Variables, Lists, Dictionaries, Functions
- File handling and basic data input/output
- Practice: Create a mini data parser using CSV file

Module 3: Working with Data in Python (6 Hours)

- Using built-in Python modules to manipulate data (no pandas)
- Sorting, filtering, and summarizing data using logic
- Creating simple reports from raw data
- Activity: Write a Python program to summarize student performance data

Module 4: HTML + Data Presentation (4 Hours)

- Basics of HTML & CSS
- Displaying data tables using HTML
- Simple web templates to show insights from Python programs
- Activity: Create a dashboard-style HTML report

Module 5: Introduction to Algorithms & Patterns (4 Hours)

- Discuss logic patterns used in data science
- Basic searching, sorting, frequency counting
- Hands-on with Java/C for algorithm thinking
- Mini-task: Build a word count program from raw text file

Module 6: Mini Capstone Project (6 Hours)

- Project Idea: “Student Result Analyzer” or “Simple Sales Tracker”
- Flow:
 - Use Python to read & process data
 - Output results as HTML report
 - Optional: Use form input to feed small datasets
- Students present their reports and code

Module 7: Internship Preparation (2 Hours)

- Resume creation (focus on C, Python, project experience)
- GitHub basics: How to upload their project
- Walkthrough of Internshala & Naan Mudhalvan portal
- Basic interview questions (C, Python, logic)