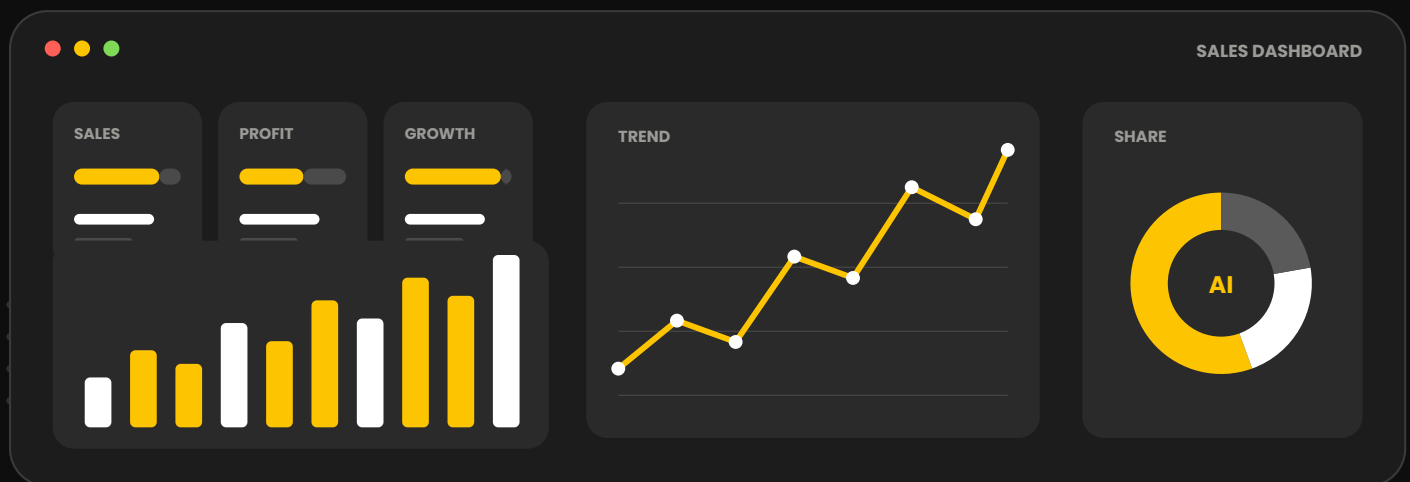


CAREER-FOCUSED PROGRAM

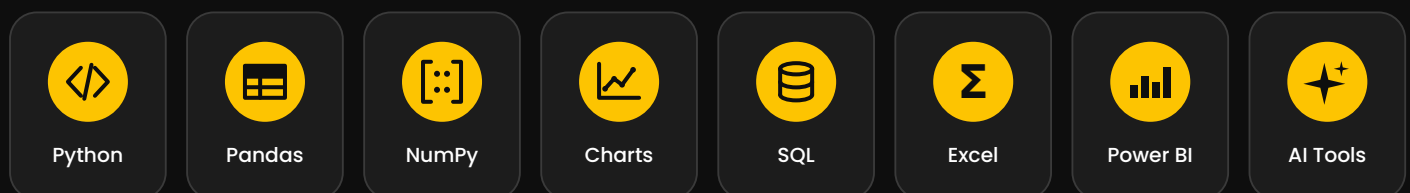
DATA ANALYTICS

with AI & AI Tools

Master Python, SQL, Excel and Power BI through hands-on practice, real-world projects and AI-powered workflows.



WHAT YOU WILL MASTER



ENROLL TODAY

Start your data career with RaiseTech

📞 9390271992

8247329739

📍 Flat No. 308, Nilgiri Block, Aditya Enclave, Ameerpet, Hyderabad - 500016

OVERVIEW

Turn Data into Decisions

This program takes you from Python fundamentals to professional dashboards. You will learn to collect, clean, analyse and visualise data using Python, SQL, Excel and Power BI, use AI tools to work faster and smarter, and apply every skill in real-world projects.

12

Modules

2

Real-World Projects

10+

Tools & Libraries

AI

Powered Workflows

YOUR LEARNING PATH



01 Programming Foundations

Core and Advanced Python, OOPS, file handling and production-level coding.



02 Data Handling

Pandas and NumPy to clean, transform and analyse real datasets.



03 Data Visualization

Matplotlib and Seaborn for charts, statistical plots and insights.



04 Databases

SQL and PL/SQL: queries, joins, procedures, cursors and triggers.



05 Analytics & BI

Excel, Advanced Excel with AI tools, and Power BI dashboards with DAX.



06 Real-World Projects

Sales Data Analysis Dashboard and Student Performance Prediction.

WHY RAISETECH



Industry-Relevant Curriculum

Designed around the latest industry standards.



Hands-On Experience

Practical skills through real-time projects and assignments.



Expert Mentorship

Learn from experienced industry professionals.



Career-Focused Training

Build job-ready skills and grow step by step.

WHAT YOU WILL LEARN

Curriculum at a Glance



MODULE 01

Core Python

Data Types · Collections · Operators · Control Flow · Functions



MODULE 02

Advanced Python

OOPS · Decorators · Generators · Exception & File Handling



MODULE 03

Pandas

Series & DataFrame · Filtering · GroupBy · Merge & Join



MODULE 04

NumPy

Arrays · Slicing · Matrix Operations · Statistical Functions



MODULE 05

Matplotlib

Line, Bar, Scatter & Pie Charts · Histograms · 3D Plots



MODULE 06

Seaborn

Categorical Plots · Regression · Pair Plots · Color Palettes



MODULE 07

SQL

DDL, DML, DCL, TCL · Joins · Sub Queries · Views · Indexes



MODULE 08

PL/SQL

Blocks · Procedures · Functions · Cursors · Packages · Triggers



MODULE 09

Excel

Formulas · Pivot Tables · Power Query · Data Cleaning · Charts



MODULE 10

Advanced Excel

Dashboards · Statistical Analysis · AI Tools · Dashboard with AI



MODULE 11

Power BI

Report Design · Power Query · DAX · Drill Through · Slicers



MODULE 12

Projects

Sales Data Analysis Dashboard · Student Performance Prediction



MODULE 01

Core Python

Python Basics

- ▶ What is Python
- ▶ Features of Python
- ▶ History of Python
- ▶ Python Installation
- ▶ Comments in Python
- ▶ Escape Characters / Sequences
- ▶ Naming conventions in Python
- ▶ Identifiers
- ▶ Variables

Program Execution

- ▶ IDLE
- ▶ PyCharm
- ▶ Jupyter Notebook
- ▶ VSC Editor

Data Types

- ▶ Numeric Types
- ▶ Text Type
- ▶ Sequence Types
- ▶ Mapping Type
- ▶ Set Types
- ▶ Boolean Type
- ▶ Binary Types
- ▶ None Type
- ▶ Byte & Bytearray Type
- ▶ Mutable vs Immutable

List []

- ▶ What is List
- ▶ List Mutability
- ▶ List vs Python Array
- ▶ List functions
- ▶ List Slicing
- ▶ Forward indexing
- ▶ Backward indexing

Set { }

- ▶ What is Set
- ▶ Set Mutability
- ▶ Set functions
- ▶ frozenset

Tuple ()

- ▶ What is tuple
- ▶ Tuple mutability
- ▶ Tuple functions
- ▶ Tuple slicing
- ▶ Forward indexing
- ▶ Backward indexing

Collections Compared

- ▶ List vs Set vs Tuple

Dictionary (key-value pair)

- ▶ What is Dictionary
- ▶ Nested Dictionary
- ▶ Dictionary operations
- ▶ Introduction to range()
- ▶ Looping through Dictionary

Programs, Type Conversion & Operators

- ▶ Basic Python Programs
- ▶ Type conversion
- ▶ Arithmetic Operators
- ▶ Comparison Operators
- ▶ Logical Operators
- ▶ Assignment Operators
- ▶ Bitwise Operators
- ▶ Membership Operators
- ▶ Identity Operators

Conditional Statements

- ▶ if statement
- ▶ if else statement
- ▶ if elif else statement
- ▶ nested if statement

Looping Statements

- ▶ For loop
- ▶ While loop
- ▶ Nested Loops

Transfer Statements

- ▶ break statement
- ▶ continue statement
- ▶ pass statement
- ▶ Control Statements - Programs
- ▶ Loop Patterns

Functions & Recursion

- ▶ What is Function
- ▶ Types of Functions
- ▶ Built-in functions
- ▶ User-defined functions
- ▶ Types of user-defined functions
- ▶ Lambda Functions
- ▶ Recursion

Strings, Modules & Packages

- ▶ Strings
- ▶ Map Reduce
- ▶ Arrays
- ▶ Modules
- ▶ Packages



MODULE 02

Advanced Python

OOPS

- ▶ Why OOPS
- ▶ class
- ▶ object
- ▶ class vs object
- ▶ __init__ method
- ▶ constructor
- ▶ self parameters
- ▶ instance variable
- ▶ class variable
- ▶ local variable
- ▶ instance method
- ▶ static method
- ▶ class method
- ▶ Accessor and Mutator

Decorators & Inheritance

- ▶ Decorator
- ▶ How to use decorator
- ▶ Inner class
- ▶ Outer class
- ▶ Inheritance
- ▶ Polymorphism
- ▶ Duck typing
- ▶ Operator overloading
- ▶ Method overloading
- ▶ Method overriding
- ▶ Magic methods

Decorators & Inheritance (contd.)

- ▶ Abstract class and abstract method
- ▶ Iterator
- ▶ Generators in Python

Production Level

- ▶ Error / Exception Handling
- ▶ File Handling
- ▶ DocStrings
- ▶ Modularization
- ▶ Pickling and Unpickling



MODULE 03

Pandas

Getting Started

- ▶ Introduction
- ▶ Real-life use case
- ▶ Importing
- ▶ Aliasing

Series

- ▶ Series and DataFrame overview
- ▶ Creating series object
- ▶ Empty series object
- ▶ Series from List / Array / DataFrame column
- ▶ NaN Value
- ▶ Series attributes (values, index, dtypes, size)
- ▶ Series methods: head(), tail(), sum(), count(), nunique()

DataFrame

- ▶ Loading different files
- ▶ DataFrame attributes
- ▶ DataFrame methods
- ▶ Rename column & index
- ▶ Inplace parameter
- ▶ Handling missing or NaN values
- ▶ iloc and loc
- ▶ Filtering
- ▶ Sorting
- ▶ GroupBy
- ▶ Merging or Joining
- ▶ Concat
- ▶ Adding & dropping columns and rows
- ▶ Date and time
- ▶ Concatenate multiple CSV files



MODULE 04

NumPy

Getting Started

- ▶ Introduction
- ▶ Installation
- ▶ PIP command
- ▶ import numpy package
- ▶ ModuleNotFoundError
- ▶ NumPy aliasing

Arrays & Matrices

- ▶ Create NumPy array
- ▶ Array manipulation
- ▶ Mathematical operations
- ▶ Indexing & slicing
- ▶ NumPy attributes
- ▶ Adding value to array of values
- ▶ Diagonal of a matrix
- ▶ Trace of a matrix
- ▶ Parsing, adding and subtracting matrices
- ▶ Filter in NumPy

Important Methods

- ▶ min(), max(), sum(), reshape()
- ▶ count_nonzero(), sort(), flatten()

Statistical Functions

- ▶ numpy.mean()
- ▶ numpy.median()
- ▶ numpy.std()
- ▶ numpy.sum()
- ▶ numpy.min()



MODULE 05

Matplotlib

Fundamentals

- ▶ Introduction
- ▶ Pyplot
- ▶ Figure class
- ▶ Axes class
- ▶ Setting limits and tick labels
- ▶ Multiple plots
- ▶ Legend

Types of Plots

- ▶ Line graph
- ▶ Bar chart
- ▶ Histograms
- ▶ Scatter plot
- ▶ Pie chart
- ▶ 3D plots

Going Further

- ▶ Working with images
- ▶ Customizing plots



MODULE 06

Seaborn

Categorical Plots

- ▶ catplot()
- ▶ stripplot()
- ▶ boxplot()
- ▶ violinplot()
- ▶ pointplot()
- ▶ barplot()

Relationship Plots

- ▶ relplot() - statistical relationships
- ▶ scatterplot()
- ▶ regplot()
- ▶ Implot()

Grids & Statistical Visuals

- ▶ FacetGrid()
- ▶ Multi-plot grids
- ▶ Statistical plots
- ▶ Color palettes
- ▶ Faceting
- ▶ Regression plots
- ▶ Distribution plots
- ▶ Categorical plots
- ▶ Pair plots



MODULE 07

SQL

Foundations

- ▶ Introduction
- ▶ DBMS vs RDBMS
- ▶ RDBMS vs MongoDB

SQL Command Types

- ▶ DDL: create, alter, drop, truncate, rename
- ▶ DML: insert, update, delete, merge
- ▶ DQL: select
- ▶ DCL: grant, revoke
- ▶ TCL: commit, rollback, savepoint

Querying

- ▶ Operators
- ▶ Group by clause
- ▶ Having clause
- ▶ Order by clause
- ▶ Joins
- ▶ Sub Queries

Database Objects

- ▶ Sequences
- ▶ Synonyms
- ▶ Indexes
- ▶ Views



MODULE 08 PL/SQL

Programming with PL/SQL

- ▶ SQL vs PL/SQL
- ▶ PL/SQL blocks
- ▶ Control statements
- ▶ Loops in PL/SQL
- ▶ Procedures
- ▶ Functions
- ▶ Cursors
- ▶ Packages
- ▶ Triggers



MODULE 09 Excel

Excel Essentials

- ▶ Introduction to Excel
- ▶ Excel interface
- ▶ Data entry
- ▶ Formatting
- ▶ Cell references
- ▶ File handling
- ▶ Sort
- ▶ Filter
- ▶ Find and Replace
- ▶ Freeze panes

Formulas & Data Prep

- ▶ Excel formulas & functions
- ▶ Text functions
- ▶ Date and time functions
- ▶ Lookup functions
- ▶ Data cleaning
- ▶ Excel tables
- ▶ Data validation
- ▶ Conditional formatting

Analysis & Visuals

- ▶ Pivot tables
- ▶ Pivot charts
- ▶ Charts and data visualization
- ▶ Power Query



MODULE 10 Advanced Excel

Advanced Analytics

- ▶ Advanced Excel functions
- ▶ Basic statistical analysis
- ▶ Excel dashboard

AI in Excel

- ▶ AI tools
- ▶ Dashboard with AI



MODULE 11 Power BI

Getting Started

- ▶ Introduction
- ▶ Power BI for data scientists
- ▶ Types of reports
- ▶ Data source types
- ▶ Installation
- ▶ Basic report design
- ▶ Data sources and visual types
- ▶ Canvas and fields

Visuals & Formatting

- ▶ Table and Tree map
- ▶ Format button and data labels
- ▶ Legend, category and grid
- ▶ CSV and PDF exports
- ▶ Visual sync, grouping
- ▶ Slicer visual
- ▶ Orientation, selection process
- ▶ Slicer: number, text, slicer list
- ▶ Bin count, binning

Hierarchies & Filters

- ▶ Hierarchies, filters
- ▶ Creating hierarchies
- ▶ Drill down options
- ▶ Expand and show
- ▶ Visual, page and report filters
- ▶ Drill through reports

Power Query

- ▶ Power Query
- ▶ Power Query transformation
- ▶ Table and column transformations
- ▶ Text and time transformations
- ▶ Power Query functions
- ▶ Merge and append transformations

DAX

- ▶ DAX functions
- ▶ DAX architecture, entity sets
- ▶ DAX data types, syntax rules
- ▶ DAX measures and calculations
- ▶ Creating measures
- ▶ Creating columns



MODULE 12

Projects

Capstone Projects

- ▶ Sales Data Analysis Dashboard
- ▶ Student Performance Prediction

PUT SKILLS TO WORK

Projects & Career Outcomes

FEATURED PROJECTS



PROJECT 01

Sales Data Analysis Dashboard

Clean and analyse sales data, then design an interactive dashboard that tracks revenue, trends and performance at a glance.

Excel / Power BI

Data cleaning

KPIs & visuals



PROJECT 02

Student Performance Prediction

Explore student data with Python, find the factors that matter and build a model that predicts performance.

Python

Pandas & NumPy

Visual analysis

SKILLS YOU WILL GAIN

- Python Programming
- OOPS & Clean Code
- Data Cleaning
- Data Analysis with Pandas
- NumPy Computation
- Data Visualization
- Statistical Plots
- SQL Querying
- PL/SQL Programming
- Excel Analytics
- Pivot Tables
- Power Query
- Power BI Dashboards
- DAX Measures
- AI-Assisted Analysis
- Data Storytelling



AI IN YOUR WORKFLOW

Go beyond traditional analytics. Learn to use AI tools inside Advanced Excel to speed up analysis, and build dashboards with AI so you can turn raw data into clear insights faster.



ROLES THIS PREPARES YOU FOR

- ▶ Data Analyst
- ▶ Business Analyst
- ▶ Power BI Developer
- ▶ Reporting / MIS Analyst
- ▶ SQL Developer (Junior)



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