



**SkillSprintTech**  
From Basics To Breakthrough

**Learn the Skills  
That  
Tech Companies  
Hire For**

# **Python, SQL & Power BI – Data Analytics Program**



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## Module 1: Python

This module builds a strong foundation in Python programming required for data analytics.

- Python Syntax, Variables, and Data Types
- Input and Output with Type Conversion
- Control Flow (if, else, elif statements)
- Loops (for and while loops)
- Functions (Defining and Calling Functions)
- Object-Oriented Programming (OOP): Classes and Objects

## Module 2: Python for Data Analysis

This module focuses on using Python libraries for data analysis and working with datasets.

- Introduction to NumPy
- NumPy Arrays and Operations
- Introduction to Pandas
- Pandas Series and DataFrames
- Reading Data from CSV and Excel Files
- Data Cleaning and Data Transformation
- Matplotlib and Seaborn (Visualization)

## Module 3: SQL Fundamentals

This module covers the core SQL concepts required to work with relational databases.

- Introduction to Databases and SQL
- SQL Queries (SELECT, INSERT, UPDATE, DELETE)
- Filtering Data using WHERE Clause
- Sorting Data using ORDER BY

## Module 4: Advanced SQL for Data Analytics

This module focuses on SQL concepts used for analytical queries and reporting.

- Aggregate Functions (COUNT, SUM, AVG, MIN, MAX)
- Grouping Data using GROUP BY
- Joining Tables (INNER, LEFT, RIGHT, FULL)
- Window Functions (ROW\_NUMBER, RANK, DENSE\_RANK, PARTITION BY)
- Case When
- Subqueries
- Views

## Module 5: Power BI – Data Preparation & Visualization

This module introduces Power BI and focuses on data preparation and visualization.

- Power BI Desktop & Power Query
- Importing Data (Excel, CSV, SQL Databases)
- Data Cleaning using Power Query
- Append, Merge, Pivot/Unpivot data
- Creating Reports and Visualizations

## Module 6: Advanced Power BI & Dashboard Project

This module focuses on building professional dashboards using Power BI.

- Data Modeling + DAX
- Relationships, Star vs Snowflake schema
- Measures vs Calculated Columns
- DAX Basics: CALCULATE, FILTER, SUMX, IF
- KPI Cards, Charts, Matrix, Custom visuals
- Drill-through, Bookmarks, Slicers, Tooltips
- Dashboard layout, UX best practices
- Power BI Service & Security
- Row-Level Security (Static & Dynamic)

## Program Outcomes

Upon successful completion of this program, participants will be able to:

- Build a strong foundation in Python programming for data analytics
- Analyze real-world data using Python and SQL through hands-on practice
- Clean, transform, and work confidently with real datasets
- Design interactive and professional Power BI dashboards for business use
- Learn through live examples and regular doubt-clearing sessions
- Gain confidence to face interviews and apply for Data Analyst and Business Analyst roles