



# Data Analyst

Cortex Skills Institute



## Data Analyst Professional Course

Duration: 5–6 Months

Fee: ₹29,999

- VLOOKUP, HLOOKUP
- XLOOKUP
- INDEX & MATCH
- TEXT Functions
- Date & Time Functions
- Financial Functions

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### Module 1: Computer Fundamentals

- Computer Basics
- Windows & File Management
- Internet & Cloud Storage
- Google Workspace Basics
- Data Types & File Formats

### Data Analysis

- Sorting & Filtering
- Conditional Formatting
- Data Validation
- Remove Duplicates
- Flash Fill
- Pivot Tables
- Pivot Charts
- Slicers
- Dashboard Creation
- What-If Analysis
- Power Query (Basics)



### Module 2: Microsoft Excel (Basic to Advanced)

#### Basic Excel

- Workbook & Worksheet
- Cells, Rows & Columns
- Formatting
- Basic Formulas
- Charts

#### Advanced Excel

- Functions & Formulas
  - SUM, AVERAGE, MAX, MIN
  - COUNT, COUNTA, COUNTIF, COUNTIFS
  - SUMIF, SUMIFS
  - IF, IFS
  - AND, OR
  - IFERROR

### Module 3: SQL (Database Management)

#### SQL Basics

- Introduction to Databases
- MySQL Installation
- Database Concepts

#### SQL Queries

- SELECT
- DISTINCT
- WHERE
- ORDER BY
- LIMIT

#### SQL Functions

- COUNT





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- SUM
- AVG
- MAX
- MIN

## Intermediate SQL

- GROUP BY
- HAVING
- JOINS
  - INNER JOIN
  - LEFT JOIN
  - RIGHT JOIN
  - SELF JOIN

## Advanced SQL

- Subqueries
- Views
- CASE Statements
- Common Table Expressions (CTE)
- Window Functions
- Stored Procedures (Introduction)

## Module 4: Statistics for Data

### Analysis

- Mean
- Median
- Mode
- Variance
- Standard Deviation
- Percentiles
- Correlation
- Probability Basics
- Normal Distribution
- Business Statistics
- Outlier Detection

## Module 5: Power BI

### Basics

- Interface
- Import Data
- Data Transformation

### Data Modeling

- Relationships
- Star Schema
- Data Cleaning

### DAX

- Measures
- Calculated Columns
- Time Intelligence (Basics)

### Visualization

- Charts
- Maps
- KPI Cards
- Tables
- Matrix
- Filters
- Slicers

### Dashboard

- Interactive Reports
- Dashboard Design
- Publishing Reports
- Power BI Service (Introduction)

## Module 6: Python for Data

### Analysis

### Python Basics

- Variables
- Data Types
- Operators
- Loops

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- Functions

## Libraries

- NumPy
- Pandas
- Matplotlib

## Data Analysis

- Read Excel & CSV Files
- Data Cleaning
- Missing Values
- Data Filtering
- Merge & Join
- GroupBy
- Pivot Tables in Pandas

## Visualization

- Line Charts
- Bar Charts
- Pie Charts
- Histograms

## Module 7: Business

### Intelligence & Reporting

- KPI Reports
- Sales Analysis
- HR Reports
- Financial Reports
- Marketing Reports
- Business Storytelling
- Dashboard Best Practices

## Module 8: AI for Data

### Analysts

- ChatGPT for Excel
- AI for SQL Queries
- AI for Power BI
- AI for Python Coding

- Microsoft Copilot
- Prompt Engineering
- Automation with AI

## Module 9: Portfolio Projects

Students will build real-world projects:

- Sales Dashboard
- HR Analytics Dashboard
- Customer Segmentation
- Inventory Management Dashboard
- Financial Performance Dashboard
- E-commerce Sales Analysis
- Marketing Campaign Analysis

## Career Development

- Resume Building
- LinkedIn Profile Optimization
- GitHub Portfolio (Basic)
- Mock Interviews
- Aptitude Preparation
- HR Interview Preparation
- Case Study Discussion

## Software Covered

- Microsoft Excel
- MySQL
- Power BI
- Python
- VS Code
- ChatGPT
- Microsoft Copilot

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## Optional Specialization (Not Included in Core Course)

| Module        | Fee    |
|---------------|--------|
| R Programming | ₹6,000 |
| Tableau       | ₹4,000 |

These modules can be offered as **advanced electives** for interested students:

### 1. R Programming (Optional)

- Introduction to R
- RStudio Setup
- Data Types & Variables
- Vectors, Lists & Data Frames
- Import Excel/CSV Data
- Data Cleaning with dplyr
- Data Visualization with ggplot2
- Statistical Analysis
- Basic Predictive Models

#### Recommended for:

Research, Statistics, Healthcare Analytics, Data Science aspirants.

### 2. Tableau (Optional)

- Interactive Dashboards
- Storytelling
- Tableau Public

### 3. Machine Learning (Optional)

- Regression
- Classification
- Clustering
- Model Evaluation

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### 4. Big Data (Optional)

- Hadoop Basics
- Spark Overview
- Distributed Data Processing

### 5. Cloud for Data Analytics (Optional)

- Microsoft Azure Fundamentals
- Google BigQuery (Overview)
- AWS Analytics Services (Overview)

