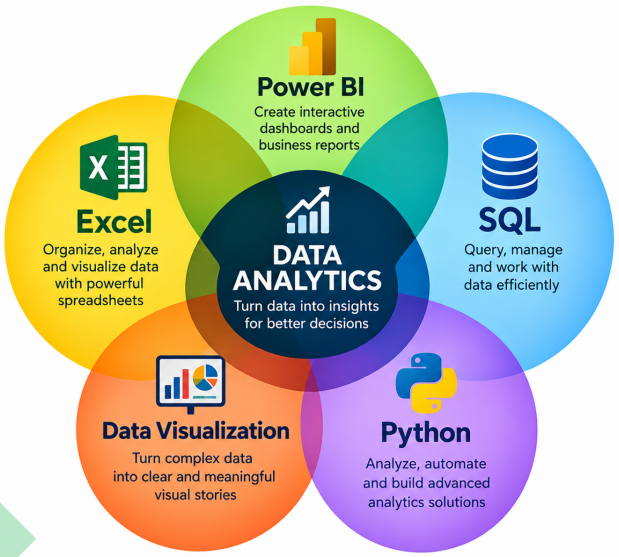
GENESIS
YOUR POTENTIAL. OUR PASSION



Data Analytics Complete Curriculum

Course Curriculum

Duration: 3 Months

Advanced Excel for Data Analytics

Excel Fundamentals (Revision)

- Excel Interface & Navigation
- Data Types & Formatting
- Basic Formulas & Functions

Advanced Formulas & Functions

- Logical Functions (IF, IFS, SWITCH)
- Lookup Functions (VLOOKUP, HLOOKUP, XLOOKUP, INDEX, MATCH)
- Text Functions (LEFT, RIGHT, MID, LEN, TRIM, CONCAT)
- Date & Time Functions Statistical Functions (COUNT, AVERAGE, MEDIAN, MODE)

Data Cleaning & Preparation

- Removing Duplicates
- Text to Columns
- Flash Fill
- Data Validation
- Conditional Formatting

Pivot Tables & Pivot Charts

- Creating Pivot Tables
- Grouping Data
- Calculated Fields
- Slicers & Timelines
- Pivot Charts

Data Visualization in Excel

- Charts (Bar, Line, Pie, Combo)
- Dynamic Charts
- Sparklines
- Dashboard Creation



Power Query (ETL in Excel)

- Importing Data
- Data Transformation
- Merging & Appending Queries

Power Pivot & Data Modeling

- Data Relationships
- DAX Basics
- Calculated Columns & Measures

Excel Automation

- Introduction to Macros
- VBA Basics
- Automating Reports

SQL Server for Data Analytics

Database Fundamentals

- DBMS vs RDBMS
- Tables, Rows, Columns
- Primary Key & Foreign Key

SQL Server Setup & Tools

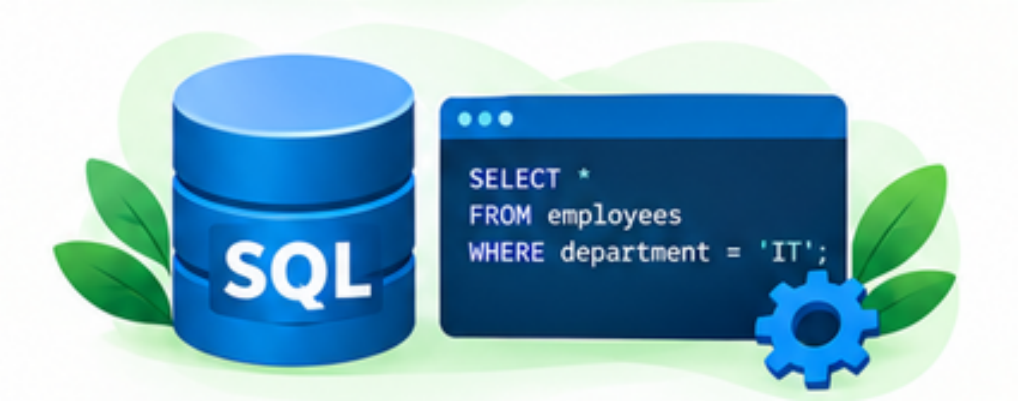
- Installation
- SQL Server Management Studio (SSMS)
- Database Creation

SQL Basics

- SELECT Statement
- WHERE Clause
- ORDER BY
- DISTINCT

SQL Operators

- Arithmetic Operators
- Comparison Operators
- Logical Operators



SQL Joins

- INNER JOIN
- LEFT JOIN
- RIGHT JOIN
- FULL JOIN
- SELF JOIN

Aggregate Functions

- COUNT(), SUM(), AVG(), MIN(), MAX()
- GROUP BY
- HAVING Clause

Subqueries & Nested Queries

- Scalar Subqueries
- Correlated Subqueries



Views & Indexes

- Creating Views
- Index Types & Optimization

Stored Procedures & Functions

- Creating Procedures
- Parameters
- User Defined Functions

Triggers

- AFTER & INSTEAD OF Triggers

Advanced SQL

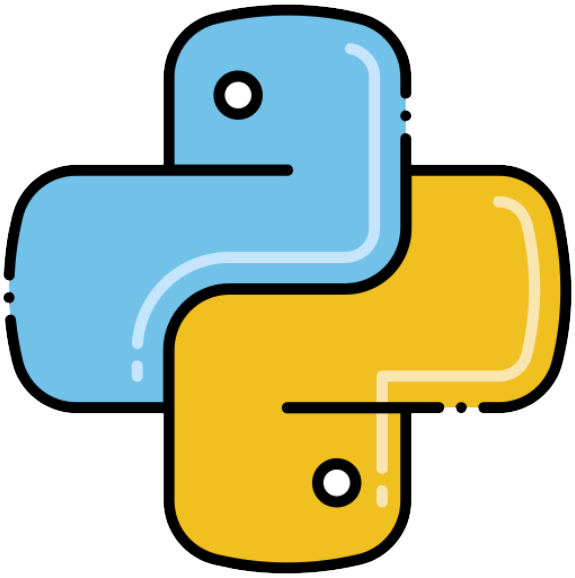
- Window Functions (ROW_NUMBER, RANK)

- CTE (Common Table Expressions)
- Transactions

Performance Optimization

- Query Optimization
- Indexing Strategies

Python for Data Analytics



Python Basics

- Variables & Data Types
- Operators
- Control Statements (if, loops)

Data Structures

- Lists
- Tuples
- Sets
- Dictionaries

Functions & Modules

- User Defined Functions
- Lambda Functions
- Modules & Packages

NumPy (Numerical Computing)

- Arrays
- Array Operations
- Mathematical Functions



Pandas (Data Analysis)

- Series & DataFrames
- Data Cleaning
- Handling Missing Values
- Filtering & Sorting
- GroupBy Operations

Data Visualization

- Matplotlib
- Seaborn
- Plot Types (Bar, Line, Histogram, Scatter)

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Data Preprocessing



- Encoding
- Normalization
- Feature Scaling

Exploratory Data Analysis (EDA)

- Summary Statistics
- Correlation Analysis
- Outlier Detection

Working with Files

- CSV, Excel, JSON
- Database Connections

Introduction to Machine Learning



- Supervised vs Unsupervised
- Regression Basics
- Classification Basics

Scikit-learn

- Model Training
- Model Evaluation
- Train/Test Split

Automation & Scripting

- Automating Data Tasks
- Report Generation

Power BI for Data Visualization

Power BI Fundamentals

- Power BI Desktop Overview
- Data Loading

Data Transformation (Power Query)

- Cleaning Data
- Shaping Data

- Merging Queries

Data Modeling

- Relationships
- Star Schema
- Snowflake Schema



DAX (Data Analysis Expressions)

- Calculated Columns
- Measures
- Time Intelligence Functions

Data Visualization

- Charts & Graphs
- Tables & Matrix
- Cards & KPIs

Dashboard Development

- Interactive Dashboards
- Filters & Slicers
- Drill-down & Drill-through

Advanced Visualizations

- Custom Visuals
- Maps (Geo Visualization)



Power BI Service

- Publishing Reports
- Sharing Dashboards
- Data Refresh

Real-Time Analytics

- Streaming Data
- Live Dashboards

Performance Optimization

- Data Model Optimization
- Reducing Load Time

Capstone Projects

Sales Dashboard

- Excel + Power BI Integration

Customer Analysis

- SQL + Power BI

Data Cleaning Pipeline

- Python + Pandas

End-to-End Analytics Project

- Data Collection
- Cleaning
- Analysis
- Visualization
- Reporting



Industry Skills & Tools

- Data Storytelling
- Business Intelligence Concepts
- KPI Design
- Dashboard Best Practices
- Version Control (Git)
- Resume Building & Portfolio



Contact US

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