



Data Analyst with AI

100% Hands-On, Job Oriented

What is Data Analysis?

Data Analysis is an art to understand the data, identify hidden trends of data. This involves Data Presentation, Data Classification and Detailed understanding of data.

How to become a Data Analyst with AI?

Step 1: Learn Database Concepts & SQL (From Scratch, step by step)

Step 2: Learn **Power BI (In Detail, with our Realtime Scenarios & Projects)**

Step 3: Learn **Python (From Data Analytics. In detail. Programming NOT needed).**

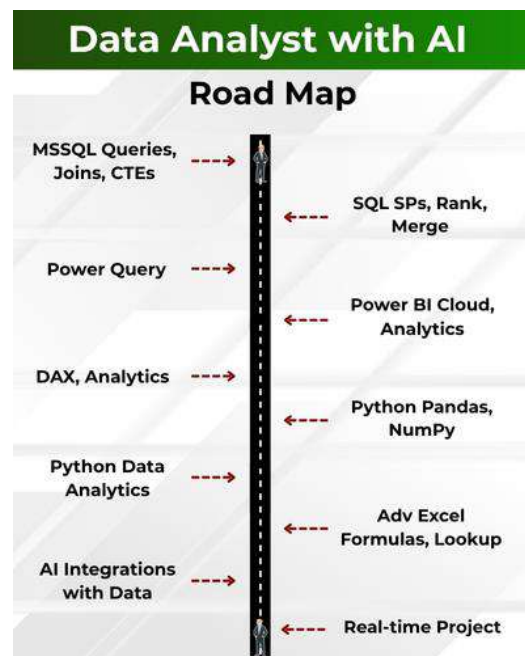
Step 4: Become a Certified Data Analyst From Microsoft. We shall guide you for the exam !

Who can join this course?

Anyone. We start the classes from scratch, right from Basics of Data, Database, Analysis. Then proceed for Scenario based activities and job orientation with Realtime Project.

Data Analyst Training with AI, CoPilot:

- **Module 1: MSSQL & TSQL**
3 Weeks; 2 Realtime Case Studies
- **Module 2: Power BI**
4 Weeks; 4 Realtime Case Studies
- **Module 3: Python Analytics**
3 Weeks; 1 Realtime Case Study
- **Module 4: Realtime Projects**
Includes Advanced Excel
Guidance for PL 300 Exam
1:1 Resume
1:1 Mock Interview



Detailed Course Content

This detailed content with 100% Hands-On, Daily Assignments make you 100% Job ready !
Pls take a **print copy** of this doc BEFORE you attend for our LIVE Online demo (Intro Class).

Module 1: SQL Server TSQL (MS SQL) Queries

Ch 1: Data Analyst Job Roles

- ✓ Introduction to Data
- ✓ Data Analyst Job Roles
- ✓ Data Analyst Challenges
- ✓ Data and Databases Intro

Ch 2: Database Intro & Installations

- ✓ Database Types (OLTP, DWH, ..)
- ✓ DBMS: Basics
- ✓ SQL Server 2025 Installations
- ✓ SSMS Tool Installation
- ✓ Server Connections, Authentications

Ch 3: SQL Basics V1 (Commands)

- ✓ Creating Databases (GUI)
- ✓ Creating Tables, Columns (GUI)
- ✓ SQL Basics (DDL, DML, etc..)
- ✓ Creating Databases, Tables
- ✓ Data Inserts (GUI, SQL)
- ✓ Basic SELECT Queries

Ch 4: SQL Basics V2 (Commands, Operators)

- ✓ DDL : Create, Alter, Drop, Add, modify, etc..
- ✓ DML: Insert, Update, Delete, select into, etc..
- ✓ DQL: Fetch, Insert... Select, etc..
- ✓ SQL Operations: LIKE, BETWEEN, IN, etc..
- ✓ Special Operators

Ch 5: Data Types

- ✓ Integer Data Types
- ✓ Character, MAX Data Types
- ✓ Decimal & Money Data Types
- ✓ Boolean & Binary Data Types
- ✓ Date and Time Data Types
- ✓ SQL_Variant Type, Variables

Ch 6: Excel Data Imports

- ✓ Data Imports with Excel

- ✓ SQL Native Client
- ✓ Order By: Asc, Desc
- ✓ Order By with WHERE
- ✓ TOP & OFFSET
- ✓ UNION, UNION ALL

Ch 7: Schemas & Batches

- ✓ Schemas: Creation, Usage
- ✓ Schemas & Table Grouping
- ✓ Real-world Banking Database
- ✓ 2 Part, 3 Part & 4 Part Naming
- ✓ Batch Concept & “Go” Command

Ch 8: Constraints, Keys & RDBMS – Level 1

- ✓ Null, Not Null Constraints
- ✓ Unique Key Constraint
- ✓ Primary Key Constraint
- ✓ Foreign Key & References
- ✓ Default Constraint & Usage
- ✓ DB Diagrams & ER Models

Ch 9: Normal Forms & RDBMS – Level 2

- ✓ Normal Forms: 1 NF, 2 NF
- ✓ 3 NF, BCNF and 4 NF
- ✓ Adding PK to Tables
- ✓ Adding FK to Tables
- ✓ Cascading Keys
- ✓ Self Referencing Keys

Database Diagrams

Ch 10: Joins & Queries

- ✓ Joins: Table Comparisons
- ✓ Inner Joins & Matching Data
- ✓ Outer Joins: LEFT, RIGHT
- ✓ Full Outer Joins & Aliases
- ✓ Cross Join & Table Combination
- ✓ Joining more than 2 tables

Ch 11: Views & RLS

- ✓ Views: Realtime Usage
- ✓ Storing SELECT in Views
- ✓ DML, SELECT with Views
- ✓ RLS: Row Level Security
- ✓ WITH CHECK OPTION
- ✓ Important System Views

Ch 12: Stored Procedures

- ✓ Stored Procedures: Realtime Use
- ✓ Parameters Concept with SPs
- ✓ Procedures with SELECT
- ✓ System Stored Procedures
- ✓ Metadata Access with SPs
- ✓ SP Recompilations
- ✓ Stored Procedures, Tuning

Ch 13: User Defined Functions

- ✓ Using Functions in MSSQL
- ✓ Scalar Functions in Real-world
- ✓ Inline & Multiline Functions
- ✓ Parameterized Queries
- ✓ Date & Time Functions
- ✓ String Functions & Queries
- ✓ Aggregated Functions & Usage

Ch 14: Triggers & Automations

- ✓ Need for Triggers in Real-world
- ✓ DDL & DML Triggers
- ✓ For / After Triggers
- ✓ Instead Of Triggers
- ✓ Memory Tables with Triggers
- ✓ Disabling DMLs & Triggers

Ch 15: Transactions & ACID

- ✓ Transaction Concepts in OLTP
- ✓ Auto Commit Transaction
- ✓ Explicit Transactions
- ✓ COMMIT, ROLLBACK
- ✓ Checkpoint & Logging
- ✓ Lock Hints & Query Blockin
- ✓ READPAST, LOCKHINT

Ch 16: CTEs & Tuning

- ✓ Common Table Expression
- ✓ Creating and Using CTEs
- ✓ CTEs, In-Memory Processing
- ✓ Using CTEs for DML Operations
- ✓ Using CTEs for Tuning
- ✓ CTEs: Duplicate Row Deletion

Ch 17: Indexes Basics, Tuning

- ✓ Indexes & Tuning
- ✓ Clustered Index, Primary Key
- ✓ Non Clustered Index & Unique
- ✓ Creating Indexes Manually

- ✓ Composite Keys, Query Optimizer
- ✓ Composite Indexes & Usage

Ch 18: Group By Queries

- ✓ Group By, Distinct Keywords
- ✓ GROUP BY, HAVING
- ✓ Cube() and Rollup()
- ✓ Sub Totals & Grand Totals
- ✓ Grouping() & Usage
- ✓ Group By with UNION
- ✓ Group By with UNION ALL

Ch 19: Joins with Group By

- ✓ Joins with Group By
- ✓ 3 Table, 4 Table Joins
- ✓ Join Queries with Aliases
- ✓ Join Queries & WHERE
- ✓ Join Queries & Group By
- ✓ Joins with Sub Queries
- ✓ Query Execution Order

Ch 20: Sub Queries

- ✓ Sub Queries Concept
- ✓ Sub Queries & Aggregations
- ✓ Joins with Sub Queries
- ✓ Sub Queries with Aliases
- ✓ Sub Queries, Joins, Where
- ✓ Correlated Queries

Ch 21: Cursors & Fetch

- ✓ Cursors: Realtime Usage
- ✓ Local & Global Cursors
- ✓ Scroll & Forward Only Cursors
- ✓ Static & Dynamic Cursors
- ✓ Fetch, Absolute Cursors

Ch 22: Window Functions, CASE

- ✓ IIF Function and Usage
- ✓ CASE Statement Usage
- ✓ Window Functions (Rank)
- ✓ Row_Number()
- ✓ Rank(), DenseRank()
- ✓ Partition By & Order By

Ch 23: Merge(Upsert) & CASE, IIF

- ✓ Merge Statement

- ✓ Upsert Operations with Merge
- ✓ Matched and Not Matched
- ✓ IIF & CASE Statements
- ✓ Merge Statement inside SPs
- ✓ Merge with OLTP & DWH

Ch 24: Key Take-Aways from Module 1

- ✓ Case Study 1: Medicare: Tasks, Solutions
- ✓ Case Study 2: ECommerce: Task, Solutions
- ✓ Chapter Wise Assignments: Solutions
- ✓ Dailly Assignments: Review (Feedback)
- ✓ Weekly Mock Interview: Feedbacks

Module 2: Power BI with AI, CoPilot

Ch 1: Power BI Intro, Installation

- ✓ Power BI & Data Analysis
- ✓ 5 Design Tools, 3 Techniques
- ✓ 2 Hosting Solutions
- ✓ Power BI with Co-Pilot & AI
- ✓ Power BI Installation

Ch 2: Report Design Concepts

- ✓ Basic Report Design (PBIX)
- ✓ Get Data, Canvas (Design)
- ✓ Data View, Data Models
- ✓ Data Points, Spotlight
- ✓ Focus Mode, PDF Exports

Ch 3: Visual Interactions, PBIT

- ✓ Visual Interactions & Edits
- ✓ Limitations with Visual Edits
- ✓ Creating Power BI Templates
- ✓ CSV Exports & PBIT Imports

Ch 4: Grouping, Hierarchies

- ✓ Creating Groups : Lists
- ✓ Creating Groups: Bins
- ✓ List Items & Group Edits
- ✓ Bin Size & Bin Count

Ch 5: Slicer & Visual Sync

- ✓ Slicer Visual in Power BI

- ✓ Slicer: Format Options
- ✓ Single Select, Multi Select
- ✓ Slicer: Select All On / Off
- ✓ Visual Sync with Slicers

Ch 6: Hierarchies & Drill-Down

- ✓ Hierarchies: Creation, Use
- ✓ Hierarchies: Advantages
- ✓ Drill Up, Drill Down
- ✓ Conditional Drill Down
- ✓ Filtered Drill Down, Table View

Ch 7: Filters & Drill Thru

- ✓ Power BI Filters
- ✓ Basic, Top & Advanced
- ✓ Visual Filters, Page Filters
- ✓ Report Level Filters, Clear Filter
- ✓ Drill Thru Filters & Usage

Ch 8: Bookmarks, Buttons

- ✓ Power BI Bookmarks
- ✓ Images: Actions, Bookmarks
- ✓ Buttons: Actions, Bookmarks
- ✓ Page to Page Navigations
- ✓ Score Cards, Master Pages

Ch 9: SQL DB Access & Big Data

- ✓ SQL DB Access, Queries
- ✓ Storage Modes: Direct Query
- ✓ Formatting & Date Time
- ✓ Storage Modes in Power BI
- ✓ Azure (Big Data) Access & Formatting

Ch 10: Power BI Visualizations

- ✓ Charts, Bars, Lines, Area
- ✓ TreeMaps & HeatMaps
- ✓ Funnel, Card, Multrow Card
- ✓ PieCharts & Waterfall
- ✓ Scatter Chart, Play Axis
- ✓ Infographics, Classifications

Ch 11: Power Query Introduction

- ✓ Power Query (Mashup)
- ✓ ETL Transformations in PBI

- ✓ Power Query Expressions
- ✓ Table Combine Options
- ✓ Merge, Union All Options
- ✓ Close, Apply & Visualize

Ch 12: Power Query : Table Tfns

- ✓ Table Duplicate, Header Promotion
- ✓ Group By Transformation
- ✓ Aggregate, Pivot Operation
- ✓ Reverse Rows, Count Rows
- ✓ Advanced Power Query Mode

Ch 13: Power Query: Column Tfn

- ✓ Any Column Transformations
- ✓ Data Type Detection, Change
- ✓ Rename, Replace, Move
- ✓ Fill Up, Fill Down
- ✓ Step Edits & Rollbacks

Ch 14: Power Query: Text, Date

- ✓ String / Text Transformations
- ✓ Split, Merge, Extract, Format
- ✓ Numeric and Date Time
- ✓ Add Column & Expressions
- ✓ Expressions and New Columns
- ✓ Column From Examples

Ch 15: Power Query: Parameters

- ✓ Parameters in Power Query
- ✓ Static Parameters, Defaults
- ✓ Dynamic Dropdowns, Lists
- ✓ Linking with Table Queries
- ✓ Step Edits, Type Conversions

Ch 16: Power BI Cloud: Publish

- ✓ Power BI Cloud Concepts
- ✓ Workspace Creation, Usage
- ✓ Report Publish Cloud
- ✓ Report Edits in Cloud
- ✓ Semantic Models & Usage

Ch 17: Power BI Cloud Dashboards

- ✓ Power BI Dashboards
- ✓ Dashboard Creation, Usage

- ✓ Pin Visuals, Pin LIVE Pages
- ✓ Add Image, Video Tiles
- ✓ Q&A & Pin Tiles

Ch 18: Power BI Cloud Operations

- ✓ Report Shares, Alerts
- ✓ Subscriptions, Exploration
- ✓ Downloads & Edits
- ✓ Report Cloning in Cloud
- ✓ QR Codes, Web Publish
- ✓ Lineage & Metrics

Ch 19: Power BI Cloud Gateways

- ✓ Data Gateways, Data Refresh
- ✓ Install, Configure Gateways
- ✓ Data Sources Configurations
- ✓ Data Refresh & Scheduling
- ✓ Gateway Optimizations

Ch 20: Power BI Cloud Apps

- ✓ Power BI Apps: Creation
- ✓ App Sections & Content
- ✓ Audience Options
- ✓ App Security & Sharing
- ✓ App Updates, Favourites
- ✓ App URL, End User Access

Ch 21: Power BI Report Server

- ✓ SQL Server 2025 (Mandatory Installations)
- ✓ Power BI Report Server
- ✓ Report Server Vs Cloud
- ✓ Installation, Configuration
- ✓ RS Config Tool Options
- ✓ Report Database, TempDB
- ✓ Web Service & Server URL

Ch 22: Paginated Reports

- ✓ Report Builder Tool
- ✓ Paginated Report (RDL)
- ✓ Report Expressions (RDL)
- ✓ Tablix, Chart Wizards
- ✓ Fields & Drill-Down
- ✓ RDL Report Publish

Ch 23: DAX Concepts (Basics)

- ✓ DAX Concepts: Intro & Realtime Need
- ✓ DAX Columns: Creation, Use
- ✓ DAX Measures: Creation, Use
- ✓ DAX Functions: IIF, ISBLANK
- ✓ SUM, CALCULATE Functions
- ✓ DAX Cheat Sheet

Ch 24: DAX Quick Measures

- ✓ Quick Measures in Power BI
- ✓ Average & Filters
- ✓ Running Totals
- ✓ Star Rating Calculations
- ✓ DAX Measures in Data View
- ✓ DAX in Visuals
- ✓ DAX in Cloud Reports

Ch 25: Data Modelling, DAX

- ✓ Dimensions Tables
- ✓ Fact Tables & DAX Measures
- ✓ Data Models & Relations
- ✓ DAX Expressions
- ✓ Star & Snowflake Schemas
- ✓ DAX Joins & Expressions

Ch 26: DAX Joins, Variables

- ✓ CALCULATEX & Variables
- ✓ COUNT, COUNTA, etc..
- ✓ SUM, SUMX, etc..
- ✓ SELECTED MEMEBER
- ✓ Filter Context, RETRUN
- ✓ Dynamic Report with DAX

Ch 27: DAX Time Intelligence

- ✓ Need for Time Intelligence
- ✓ Date Table Generation
- ✓ Time Intelligence with DAX
- ✓ PARALLELPERIOD, DATE
- ✓ CALENDAR, Total Functions
- ✓ YTD, QTD, MTD with DAX

Ch 28: DAX - Row Level Security

- ✓ RLS: Row Level Security

- ✓ Data Modelling & Roles
- ✓ Verify Roles (Testing)
- ✓ Add Cloud Users to Roles
- ✓ Dynamic Row Level Security
- ✓ Testing RLS in Power BI

Ch 29: Analytical Reports

- ✓ Analytical Report Concepts
- ✓ Excel Data Analytics
- ✓ Excel with Power BI Cloud
- ✓ SQL, AVRO, JSON Sources
- ✓ Analyse in Excel (Cloud)
- ✓ Excel Reports to Cloud

Ch 30: PL 300 Exam Guidance, CoPilot

- ✓ PL 300 Exam (Microsoft Certified Data Analyst) Guidance
- ✓ PL 300 Exam Mocks
- ✓ AI Components in Power BI
- ✓ CoPilot Practical Uses
- ✓ CoPilot with Desktop
- ✓ CoPilot with Cloud
- ✓ Need for AI Analytics (Fabric)

Ch 31: Key Take-Aways from Module 2

- ✓ Case Study 1: Medicare: Tasks, Solutions
- ✓ Case Study 2: ECommerce: Task, Solutions
- ✓ Chapter Wise Assignments: Solutions
- ✓ Dailly Assignments: Review (Feedback)
- ✓ Weekly Mock Interview: Feedbacks

- Realtime Project 1 (ECommerce / Financial Analysis)
- Realtime Project 2 (Health Care / Banking)

Module 3: Python (For Data Analysts)

Ch 1: Python Introduction

- ✓ Python Introduction
- ✓ Python Versions
- ✓ Python Implementations
- ✓ Python Installations
- ✓ Python IDE & Usage
- ✓ Jupyter Notebooks

Ch 2: Python Operations

- ✓ Basic Operations in Python
- ✓ Python Scripts, Print()
- ✓ Single, Multiline Statements
- ✓ Python: Internal Architecture
- ✓ Compiler Versus Interpreter

Ch 3: Data Types & Variables

- ✓ Integer / Int Data Types
- ✓ Float, String Data Types
- ✓ Sequence Types: List, Tuple
- ✓ Range, Complex & memview
- ✓ Retrieving Data Type: type()

Ch 4: Python Operators

- ✓ Arithmetic, Assignment Ops
- ✓ Comparison Operators
- ✓ Operator Precedence
- ✓ If ... Else Statement, Pass
- ✓ Short Hand If, OR, AND
- ✓ ELIF and ELSE IF Statements

Ch 5: Python Loops, Iterations

- ✓ Python Loop & Realtime Use
- ✓ Python While Loop Statement
- ✓ Break and Continue Statement
- ✓ Iterations & Conditions
- ✓ Exit Conditions & For Loops
- ✓ iter() and Looping Options

Ch 6: Python Functions

- ✓ Python Functions & Usage
- ✓ Function Parameters
- ✓ Default & List Parameters
- ✓ Python Lambda Functions
- ✓ Recursive Functions, Usage
- ✓ Return & Print @ Lambda

Ch 7: Python Modules

- ✓ Import Python Modules
- ✓ Built In Modules & dir
- ✓ datetime module in Python
- ✓ Date Objections Creation
- ✓ strftime Method & Usage
- ✓ imports & datetime.now()

Ch 8: Python User Inputs & TRY

- ✓ Try Except, Exception Handling
- ✓ Raise an exception method
- ✓ TypeError, Scripting in Python
- ✓ Python User Inputs
- ✓ Python Index Numbers
- ✓ input() & raw_input()

Ch 9: Python File Handling

- ✓ File Handling, Activities
- ✓ Loop, Write, Close Files
- ✓ Appending, Overwriting
- ✓ import os, path.exists
- ✓ f.open, f.write
- ✓ f.read, f.close

Ch 10: Pandas DataFrames 1

- ✓ Installation of Pandas
- ✓ Python Modules & Pandas
- ✓ Pandas Codebase & Usage
- ✓ import pandas.DataFrame
- ✓ Pandas Series, arrays

Ch 11: Pandas DataFrames 2

- ✓ Indexes & Named Options
- ✓ Locate Row and Load Rows
- ✓ Row Index & Index Lists
- ✓ Load Files Into a DataFrame
- ✓ df.to_string() Function
- ✓ tail() & null() Function

Ch 12: Pandas Transformations

- ✓ Pandas - Cleaning Data
- ✓ Replace, Transform Columns
- ✓ Data Discovery & Column Fill
- ✓ Identify & Remove Duplicates
- ✓ dropna(), fillna() Functions
- ✓ Data Plotting & matplotlib Lib

Ch 13: Realtime Project (Banking / Finance) For Data Analysis [End to End]

Ch 14: Weekly Mock Interview Review meet ++ 1:1 Resume Meet

 **For free demo:** Reach us on Call/WhatsApp @ +91 9666 64 0801 / +91 9666 44 0801

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