



Complete Practical, Real-time Job Oriented Training

Data Analyst Training with AI, CoPilot

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.

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.

How to become a Data Analyst with AI?

Step 1: Learn **SQL Server** TSQL (MSSQL) Queries. 400+ Queries with concept wise FAQs

Step 2: Learn **Power BI**. Concept wise FAQs, Assignments, Case Studies

Step 3: Learn **Python**. Concept wise FAQs, Assignments, Complete Realtime Project (End to End)

Step 4: Learn AI with CoPilot. Integrate with Power BI & Big Data Analytics.

What are the Certifications from Microsoft for Data Analyst ?

Our course includes Data Analyst Certification Exam Guidance (PL 300)

Ref: <https://learn.microsoft.com/en-us/credentials/certifications/data-analyst-associate/>

**100% Practical
Step by Step**

- Basic to Advanced Data Analysis
- Latest, Updated Analytic Controls
- Job Oriented, Step by Step
- Concept Wise FAQs, Answers
- Weekly Case Studies, Solutions
- Data Analytics Exam (PL-300) Guidance
- Real-time Projects & Solutions
- Resume Guidance, Mock Interviews

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Data Analyst Training

1 Database Concepts, SQL Queries

2 Power BI

3 Python

Excel

Excel

Excel

🔥 🔥 Detailed Course Content 🔥 🔥

Module 1: SQL Server TSQL (MSSQL)

Ch 1: Introduction <ul style="list-style-type: none"> ✓ Database Introduction ✓ Types of Databases ✓ Need for & ETL, DWH ✓ BI Implementations ✓ SQL Server Advantages ✓ Version, Editions of MSSQL ✓ Data Analyst Job Roles 	Ch 2: Installations <ul style="list-style-type: none"> ✓ SQL Server 2022, 2019 ✓ SSMS Tools Installation ✓ Database Engine (OLTP) ✓ SCM, Configuration Tools ✓ Instance Types, Uses ✓ Authentication Modes ✓ Collation, File Stream 	Ch 3: SQL Basics - 1 <ul style="list-style-type: none"> ✓ Need for Databases, Tables ✓ Need for SQL Commands ✓ DDL, DML & DQL Statements ✓ Database Creation @ GUI ✓ Data Operations @ GUI ✓ Session ID, SQL Context ✓ DB, Tables, Data @ SQL
Ch 4: SQL Basics - 2 <ul style="list-style-type: none"> ✓ DDL Variants in MSSQL ✓ DML Variants in MSSQL ✓ INSERT & INSERT INTO ✓ SELECT & SELECT INTO ✓ Basic Operators in SQL ✓ Special Operators in MSSQL ✓ ALTER, ADD, TRUNCATE, DROP 	Ch 5: Data Imports, Schemas <ul style="list-style-type: none"> ✓ Data Imports with Excel ✓ ORDER BY & UNION ✓ UNION ALL For Sorting Data ✓ Creating, Using Schemas ✓ Real-world Banking Database ✓ Table Migrations @ Schemas ✓ 2 Part, 3 Part & 4 Part Naming 	Ch 6: Constraints, Index Basics <ul style="list-style-type: none"> ✓ Need for Constraints, Keys ✓ NULL, NOT NULL, UNIQUE ✓ Primary Key & Foreign Key ✓ RDBMS and ER Models ✓ Identity Property, Default ✓ Clustered Index, Primary Key ✓ Non Clustered Index, Unique
Ch 7: Joins & Views Basics <ul style="list-style-type: none"> ✓ JOINS: Purpose. Inner Joins ✓ Left / Right / Full Outer Joins ✓ Cross Joins, Query Tuning ✓ Creating & Using Views ✓ DML, SELECT with Views ✓ RLS : WITH CHECK OPTION ✓ System Views & Metadata 	Ch 8: Functions(UDF), Data Types <ul style="list-style-type: none"> ✓ Using Functions in MSSQL ✓ Scalar Value Functions ✓ Inline & Multiline Functions ✓ Date & Time Functions ✓ String, Aggregate Functions ✓ Data Types : Integer, Char, Bit ✓ SQL Variant, Timestamp, Date 	Ch 9: Stored Procedures, Models <ul style="list-style-type: none"> ✓ Stored Procedures & Usage ✓ Creating, Testing Procedures ✓ Encryption, Deferred Names ✓ SPs for Validations, Analysis ✓ System SPs, Recompilation ✓ Normal Forms & Types ✓ Data Models, Self-References
Ch 10: Triggers, Temp Tables <ul style="list-style-type: none"> ✓ Need for Triggers ✓ DDL & DML Triggers ✓ Using Memory Tables ✓ Data Replication, Automation ✓ Local & Global Temp Tables ✓ Testing & Using Temp Tables ✓ SELECT .. INTO & Bulk Loads 	Ch 11: DB Architecture, Locks <ul style="list-style-type: none"> ✓ Planning VLDBs : Files, Sizing ✓ Filegroups, Extents & Types ✓ Log Files : VLF, Mini LSN ✓ Table Location, Performance ✓ Schemas, Transfer, Synonyms ✓ Transactions Types, Lock Hint ✓ Query Blocking Scenarios 	Ch 12: Cursors & CTEs, Links <ul style="list-style-type: none"> ✓ Cursors : Realtime Use ✓ Fetch & Access Cursor Rows ✓ CTEs for SELECT, DML ✓ CTEs: Scenarios & Tuning ✓ Linked Servers, Remote Joins ✓ Linked Servers: MSDTC, RPC ✓ Tuning Remote Queries
Ch 13: Merge, Upsert & Rank <ul style="list-style-type: none"> ✓ Need for Merge in ETL ✓ Incremental Loads with SQL 	Ch 14: Grouping & Cube <ul style="list-style-type: none"> ✓ Group By & HAVING ✓ Cube, Rollup & Grouping 	Ch 15: Self Joins, Excel Analysis <ul style="list-style-type: none"> ✓ Self Joins & Self References ✓ UNION, UNION ALL

✓ MERGE and RANK Functions	✓ Joins with Group By	✓ Sub Queries with Joins
✓ Window Functions, Partition	✓ 3 Table, 4 Table Joins	✓ IIF, CASE, EXISTS Statements
✓ Identify, Remove Duplicates	✓ Query Execution Order	✓ Excel Analytics, Pivot Reports

Realtime Case Study : Health-Care Domain

Module 2: Power BI

Ch 16: Power BI Introduction <ul style="list-style-type: none"> ✓ Reporting Basics & Types ✓ Interactive, Analytical Reports ✓ Paginated Reports (RDL) ✓ Power BI Eco System ✓ Power BI Tools, Service, Server ✓ Need for Power Query (M) ✓ Need for DAX & Cloud 	Ch 17: Power BI Basic Reports <ul style="list-style-type: none"> ✓ Power BI Desktop Installation ✓ Basic Report Design (PBIX) ✓ Data View, Data Models ✓ Data Points, Aggregations ✓ Focus Mode, Spotlight, Exports ✓ ToolTip, PBIX and PBIT ✓ Visual Interactions & Edits 	Ch 18: Grouping, Hierarchies <ul style="list-style-type: none"> ✓ Creating Groups in Power BI ✓ Groups : Creation & Usage ✓ Group Edits Options ✓ Bins & Bin Size, Bin Count ✓ Hierarchies: Creation, Use ✓ Drill Down, Drill Up ✓ Conditional Drill Down
Ch 19: Visual Sync, Filters <ul style="list-style-type: none"> ✓ Slicer & Single Select ✓ Multi Select Options ✓ Integer, Character Slicers ✓ Visual Sync with Slicers ✓ Filters: Visual, Page, Report ✓ Drill Thru Filters & Usage ✓ Basic, Top & Advanced ✓ Clear Filter Options, Resets 	Ch 20: Bookmarks, Big Data <ul style="list-style-type: none"> ✓ Bookmarks Creation & Usage ✓ Visual Interactions, Bookmarks ✓ Images : Actions, Bookmarks ✓ Big Data Access with Power BI ✓ Storage Modes: Direct Query ✓ Import & Performance Impact ✓ Formatting & Data Refresh ✓ Summary, Date Time Formats 	Ch 21: Power BI Visualizations <ul style="list-style-type: none"> ✓ Chart and Bar Visuals ✓ Line and Area Charts ✓ Maps, TreeMaps, HeatMaps ✓ Funnel, Card, Multitrow Card ✓ PieCharts & Settings ✓ Waterfall, Sentiment Colors ✓ Scatter Chart, Play Axis ✓ Infographics, Classifications
Ch 22: Power Query Level 1 <ul style="list-style-type: none"> ✓ Power Query (Mashup) ✓ ETL Transformations in PBI ✓ Power Query Expressions ✓ Table Combine Options ✓ Merge, Union All Options ✓ Table Transformations 	Ch 23: Power Query Level 2 <ul style="list-style-type: none"> ✓ Any Column Transformations ✓ String / Text Transformations ✓ Numeric Analytics & Mashup ✓ Date Time Transformations ✓ Add Column Transformations ✓ Expressions and New Columns 	Ch 24: Power Query Level 3 <ul style="list-style-type: none"> ✓ Parameters in Power Query ✓ Static Parameters, Defaults ✓ Dynamic Dropdowns, Lists ✓ Linking with Table Queries ✓ Column From Examples ✓ Step Edits, Type Conversions
Ch 25: Power BI Cloud - 1 <ul style="list-style-type: none"> ✓ Power BI Cloud Concepts ✓ Workspace Creation, Usage ✓ Report Publish & Edits ✓ Semantic Models in Realtime ✓ Dashboard Creation, Usage ✓ Clone, Share, Subscribe ✓ Q&A, Lineage, Settings 	Ch 26: Power BI Cloud - 2 <ul style="list-style-type: none"> ✓ Data Gateways, Data Refresh ✓ Data Source Configurations ✓ Data Refresh & Scheduling ✓ Gateway Optimizations ✓ Semantic Model Optimizations ✓ Report Optimizations ✓ Dashboard Optimizations 	Ch 27: Power BI Cloud - 3 <ul style="list-style-type: none"> ✓ Power BI Apps, Shares ✓ App Sections & Options ✓ App Updates, Security ✓ Excel Analytics ✓ Data Explorer Options ✓ Sharing, Subscriptions ✓ Alerts, Metrics, Insights

Ch 28: Report Server & DAX <ul style="list-style-type: none"> ✓ Power BI Report Server ✓ Report Database, TempDB ✓ Web Service & Server URL ✓ Paginated Reports (RDL) ✓ Report Builder Tool Usage ✓ DAX : Purpose, Realtime Use 	Ch 29: DAX Level 2 <ul style="list-style-type: none"> ✓ DAX Measures Creation, Use ✓ DAX Functions: IIF, ISBLANK ✓ SUM, CALCULATE Functions ✓ DAX Cheat Sheet : Examples ✓ Quick Measures in Power BI ✓ Running Totals, Filters 	Ch 30: DAX Level 3 <ul style="list-style-type: none"> ✓ Star Rating Calculations ✓ Data Models & DAX ✓ Star & Snowflake Schemas ✓ Dimensions, Fact Tables ✓ DAX Expressions & Joins DAX Variables, Usage
Ch 31: DAX Level 4 <ul style="list-style-type: none"> ✓ Dynamic Report with DAX ✓ SELECTED MEMEBER ✓ Time Intelligence with DAX ✓ PARALLELPERIOD, DATE ✓ DAX with Big Data ✓ Big Data Analytics 	Realtime Project - Requirements <ul style="list-style-type: none"> ✓ Customer Requirement ✓ Scope of the Project ✓ End User Take Aways ✓ Implementation Phases ✓ Data Sources & Types ✓ Data Sheets, Project Planning 	Realtime Project - Implementation <ul style="list-style-type: none"> ✓ Excel Data Sources ✓ SQL Database Sources ✓ Azure SQL DB Sources ✓ AVRO, JSON, PDF Sources ✓ Reports, Dashboards, Apps ✓ Project Solution & FAQs

Module 3: Python Curriculum

Ch 34: Python Introduction <ul style="list-style-type: none"> ✓ Need for Data Analytics ✓ Python in Data Analysis ✓ History of Python ✓ Python Versions ✓ Python Implementations ✓ Python Installations ✓ Python IDE & Usage ✓ Jupyter Notebooks 	Ch 35: Python Basics, Architecture <ul style="list-style-type: none"> ✓ Python Scripting Options ✓ Basic Operations in Python ✓ Python Scripts, Print() ✓ Single, Multiline Statements ✓ Adding Cells, Saving Notebook ✓ Single, Multi Line Comments ✓ Python : Internal Architecture ✓ Compiler Versus Interpreter 	Ch 36: Data Types & Variables <ul style="list-style-type: none"> ✓ Integer / Int Data Types ✓ Float & String Data Types ✓ Boolean, Binary Types ✓ Sequence Types: List, Tuple ✓ Range, Complex & memview ✓ Retrieving Data Type: type() ✓ Multi Assignments & Casting ✓ Unpack Collection, Outputs
Ch 37: Python Operators <ul style="list-style-type: none"> ✓ Arithmetic, Assignment Ops ✓ Comparison Operators ✓ Logical, Identity Operators ✓ Member, Bitwise Operators ✓ Operator Precedence ✓ If ... Else Statement, Pass ✓ Short Hand If, OR, AND ✓ ELIF and ELSE IF Statements ✓ Expressions, Ternary OPs 	Ch 38: Python Loops, Iterations <ul style="list-style-type: none"> ✓ Python Loop & Realtime Use ✓ Python While Loop Statement ✓ Break and Continue Statement ✓ Using Print with While() ✓ Iterations & Conditions ✓ Exit Conditions & For Loops ✓ Break, Continue & Range ✓ __iter__() and __next__() ✓ iter() and Looping Options 	Ch 39: Python Collections <ul style="list-style-type: none"> ✓ Python Collections (Arrays) ✓ list() Constructor, print() ✓ Python Tuples, Tuple Items ✓ tuple() Constructor, Usage ✓ Python Sets : Syntax Rules ✓ Duplicates, Types, Ordered ✓ Python Dictionaries: Usage ✓ Changeable, Ordered Data ✓ Dictionary Construct, type()

Ch 40: Python Functions <ul style="list-style-type: none"> ✓ Python Functions & Usage ✓ Function Parameters ✓ Arguments, **kwargs ✓ Default & List Parameters ✓ Python Lambda Functions ✓ Anonymous Functions ✓ Recursive Functions, Usage ✓ Return & Print @ Lambda 	Ch 41: Python Classes & Arrays <ul style="list-style-type: none"> ✓ Python Classes & Objects ✓ __init__() Function ✓ __str__() Function ✓ Self Parameters & Objects ✓ Python Inheritance & Classes ✓ Parent & Child Classes ✓ __init__() & super() Function ✓ Polymorphism in Python 	Ch 42: Python Modules <ul style="list-style-type: none"> ✓ import Python Modules ✓ Variables in Modules ✓ Built In Modules & dir ✓ datetime module in Python ✓ Date Objections Creation ✓ strftime Method & Usage ✓ imports & datetime.now() ✓ Using Python Constructors
Ch 43: Python JSON & RegEx <ul style="list-style-type: none"> ✓ JSON Concepts, Usage ✓ Dictionary & import json ✓ Python Objects into JSON ✓ Formatting & Ordering ✓ json.dumps, print options ✓ Python Regular Expressions ✓ RegEx Module & Functions ✓ search() & span() , Strings ✓ Using RegEx with JSON 	Ch 44: Python User Inputs & TRY <ul style="list-style-type: none"> ✓ Try Except, Exception Handling ✓ NameError Resolution ✓ Python Finally Block, Usage ✓ Raise an exception method ✓ TypeError, Scripting in Python ✓ Python User Inputs ✓ Python Index Numbers ✓ Named Indexes, Usage ✓ input() & raw_input() 	Ch 45: Python File Handling <ul style="list-style-type: none"> ✓ File Handling, Activities ✓ r, a, w, x modes ✓ t, b Operations ✓ Read Only Parts ✓ Loop, Write, Close Files ✓ Appending, Overwriting ✓ import os, path.exists ✓ f.open, f.write ✓ f.read, f.close
Ch 46: Data Analytics - Pandas <ul style="list-style-type: none"> ✓ Python Modules & Pandas ✓ Pandas Codebase & Usage ✓ Installation of Pandas ✓ import pandas.DataFrame ✓ Checking Pandas Version ✓ Pandas Series, arrays ✓ Labels : Creation, Use ✓ series(), print() 	Ch 47: Data Analytics - DataFrames <ul style="list-style-type: none"> ✓ Indexes & Named Options ✓ Locate Row and Load Rows ✓ Row Index & Index Lists ✓ Load Files Into a DataFrame ✓ pd.read_csv() Function ✓ pd.options.display.max_rows ✓ df.to_string() Function ✓ tail() & null() Function 	Ch 48: Data Analytics - Pandas <ul style="list-style-type: none"> ✓ Pandas - Cleaning Data ✓ Replace, Transform Columns ✓ Data Discovery & Column Fill ✓ Identify & Remove Duplicates ✓ dropna(), fillna() Functions ✓ Pandas - Data Correlations ✓ Good & Bad Correlation ✓ Data Plotting & matplotlib Lib
Ch 49: SQL Server & Python - 1 <ul style="list-style-type: none"> ✓ SQL Server DB Engine ✓ Azure Data Studio Tool ✓ sp_execute_external_script ✓ Input Data & Result Sets ✓ DDL & DML with Python ✓ SQL_out, SQL_in ✓ Variables & Parameters ✓ Versions, Package List ✓ WITH RESULT SETS Options 	Ch 50: SQL Server & Python - 2 <ul style="list-style-type: none"> ✓ pandas.Series with SQL Server ✓ Indexing Methods in Realtime ✓ Convert series to data frame ✓ Output values into data.frame ✓ pymssql package in SQL Server ✓ pip list & Package Manager ✓ Python runtime, Py Package ✓ pymssql.connect & Usage ✓ Cursor Variables & Usage 	Ch 51: Power BI with Python <ul style="list-style-type: none"> ✓ Using Python Script Visual ✓ PyScript Options & Tuning ✓ Settings, Labelling Options ✓ Running and Testing Scripts ✓ Data Validations in Power BI ✓ Power BI: ipynb Scripts ✓ Interactive Reports ✓ Data Formatting with Python ✓ End to End Realtime Projects

Module 4: Data Analyst with AI Content

Chapter 1: Fundamental AI Concepts

- AI: Artificial Intelligence
- Real-time Implementation
- Understand Computer Vision
- Understand Natural Language Processing
- Document Intelligence and Knowledge Mining
- Understand Generative AI
- Challenges and Risks with AI
- Understand Responsible AI

Chapter 2: Fundamentals of Machine Learning

- Machine Learning Introduction
- Machine Learning Components
- Types of Machine Learning
- Regression, Binary Classification; Multiclass Classification
- Clustering, Deep Learning
- Azure Machine Learning

Chapter 3: Fundamentals of Azure AI services

- AI Services on Azure platform
- Create Azure AI Service Resources
- Use Azure AI services
- Understand Authentication for Azure AI services
- Exercise - Explore Azure AI Services

Chapter 4: Computer Vision

- Images and image processing
- Machine learning for computer vision
- Azure AI Vision
- Exercise - Analyze images in Vision Studio

Chapter 5: Natural Language Processing

- Understand Text Analytics
- Text Analysis in Azure
- Exercise - Analyze text with Language Studio

Chapter 6: Document Intelligence and Knowledge Mining

- Introduction to Document Intelligence
- Knowledge Mining
- Explore capabilities of document intelligence
- Receipt Analysis on Azure
- Exercise - Extract from data in Document Intelligence Studio

Chapter 7: Generative AI

- What is generative AI?
- What are language models?
- Using language models
- What are copilots?
- Considerations for Copilot prompts
- Extending and developing copilots
- Exercise - Explore Microsoft Copilot

Chapter 8: Generative AI in Azure

- Generative AI - Capabilities within AI in Azure
- Azure Implementation of Gen AI
- Processing Images, Codes and more

Chapter 9: AI 900 Exam Guidance

- Describe Artificial Intelligence workloads and considerations
- Describe fundamental principles of machine learning on Azure
- Describe features of computer vision workloads on Azure
- Describe features of Natural Language Processing (NLP) workloads on Azure
- Describe features of generative AI workloads on Azure

Chapter 10: Azure AI with Data Analytics - 1

- Implementing AI in Cloud
- Co-Pilot Concepts in Big Data
- AI with Azure
- AI with Azure SQL Database
- Automated Query Tuning Concepts (OLTP)

Chapter 11: Azure AI with Data Analytics - 2

- AI with Power BI
- CoPilot with Power BI – Power Query
- CoPilot with Power BI – Cloud
- CoPilot with Power BI – DAX

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Trending Job Roles

- Data Analyst
- Data Engineer
- Data Architect
- Data Scientist
- Developer, more .. !

Training Highlights

- ✓ Step by Step
- ✓ LIVE Project(s)
- ✓ Job Assistance
- ✓ Resume Guidance
- ✓ Concept wise FAQs

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----- *All the best!* -----