

DATA ANALYSIS CAREER FOUNDATIONS



Course Details

INSTRUCTORS: ENG. AMR HELAL & ENG. YAHYA ADAM

COURSE DURATION: 14 HOURS

NO PRIOR EXPERIENCE REQUIRED

E-CERTIFICATE UPON COMPLETION



About The Instructors:

ENG. AMR HELAL & ENG. YAHYA ADAM

- **Engineer Amr Hilal is a specialist in artificial intelligence and machine learning.**

He holds a diploma from AWS and a diploma in artificial intelligence from MIT in the United States. He is the founder of a company specializing in providing training programs in artificial intelligence and data science. He also delivers technical courses for the Ministry of Communications and Information Technology and provides machine learning training for the Egyptian Cabinet.

He has delivered numerous academic lectures at more than 35 Egyptian and international universities, including the American University in Cairo, Cairo University, Ain Shams University, the German University, and others.

In addition, he offers courses on several major educational platforms and works as a machine learning lecturer at a well-known Egyptian university.

- **Engineer Yehia Adam is a Data Analyst and instructor in the field of data analysis.**

He has worked on specialized training programs focused on essential analytical tools such as Python, SQL, and Excel. In addition to teaching data analysis to hundreds of learners, he has worked with multiple companies to help them analyze data and achieve optimal results and targets.

He also served as an instructor in the Digital Egypt Pioneers Initiative offered by the Ministry of Communications.

Course overview .

Data is the new currency — and companies today rely on data analysts to make smarter decisions, optimize performance, and uncover insights that drive growth.

This beginner-friendly, practical training takes you step-by-step from understanding the basics of data analysis all the way to building real dashboards and automated reports using today's top tools: SQL, Excel, Power BI, and AI-powered assistants like GPT.

Through real-world examples, guided exercises, and a final practical project, you'll learn exactly how professionals collect, clean, analyze, and visualize data — and how to speed up the entire process with AI tools and prompt engineering.

Whether you're looking to start a career in data analysis, improve your current job, or use data to grow a business — this course gives you everything you need to become confident and job-ready.



What You Will Learn (Step-by-Step)

Foundations of Data Analysis

- Understanding data types, sources, and workflows
- How analysts solve real business problems using data

SQL for Data Extraction

- Writing basic to intermediate queries
- Working with filters, joins, grouping, and aggregation
- Cleaning data directly inside databases

Excel for Data Cleaning & Insights

- Using formulas (IF, VLOOKUP, INDEX/MATCH) like a pro
- Cleaning large datasets faster
- Creating pivot tables, charts, and automated workflows

Power BI for Visualization & Dashboards

- Connecting and modeling data
- Using DAX formulas
- Designing interactive dashboards and sharing reports

AI Skills for Modern Analysts

- Prompt engineering tailored for analysis tasks
- Using GPT, Claude, and Lovable for:
 - Data cleaning
 - Report writing
 - Insight generation
 - Automation without coding

Final Project

- Build a real dashboard using SQL + Excel + Power BI + AI
- Present insights like a real analyst

Why You Should Attend

 **Because companies now want analysts who can work smarter — not longer.**
This course is designed to help you:

- Start a data analysis career even with zero experience
- Boost your salary eligibility by gaining in-demand skills
- Use AI to automate 50–70% of repetitive tasks
- Analyze data confidently without guessing
- Create dashboards recruiters and employers love
- Save hours of work with AI-assisted reporting and documentation

Whether you're a beginner, job seeker, freelancer, or business owner — mastering data + AI gives you a powerful advantage in today's digital age.

Course Content

►► **Module 1 — Introduction to Data Analysis (0.5 hr)**

- What is Data Analysis?
- Types of Data
- Overview of Tools (Excel, SQL, Power BI, AI tools)
- Real-world examples

Module 2 — SQL for Data Analysis (3 hr)

- Introduction to Databases & SQL
- Basic SQL Queries (SELECT, WHERE, ORDER BY)
- Aggregation & Grouping (GROUP BY, HAVING)
- Joining Tables
- Subqueries & Basic Data Cleaning

Module 3 — Excel for Data Cleaning & Analysis (3 hr)

- Excel Basics & Interface
- Data Cleaning Techniques
- Formulas for Analysis (IF, VLOOKUP, INDEX-MATCH)
- Pivot Tables & Charts
- Automation Tips

Module 4 — Power BI for Data Visualization (3.5 hr)

- Introduction to Power BI
- Connecting & Cleaning Data
- Data Modeling & DAX
- Visualizations & Dashboards
- Publishing & Sharing Reports

Course Content

►► **Module 5 — Prompt Engineering for Data Analysts (2 hr)**

- Introduction to Prompt Engineering
- Prompt Structures (Role, Task, Context, Example)
- Use Cases for Data Cleaning, Insights, and Reports

Module 6 — AI Tools for Data Analysis (2 hr)

- Overview of GPT, Claude, and Lovable
- Using GPT for Analysis and Report Generation
- Claude for Contextual Data Tasks
- Lovable for No-Code Automation

Module 7 — Final Project & Wrap-Up (0.5 hr)

- Combine all skills in a practical case study
- Create and present a Power BI dashboard