



DATA ENGINEERING BROCHURE

Train to be a skilled Data Engineer



PROGRAM OVERVIEW

→ **Saturday Live Classes for 3 months**

→ **1-month internship**

→ **LinkedIn Optimization**

→ **CV Review**

→ **Post-Training Support**

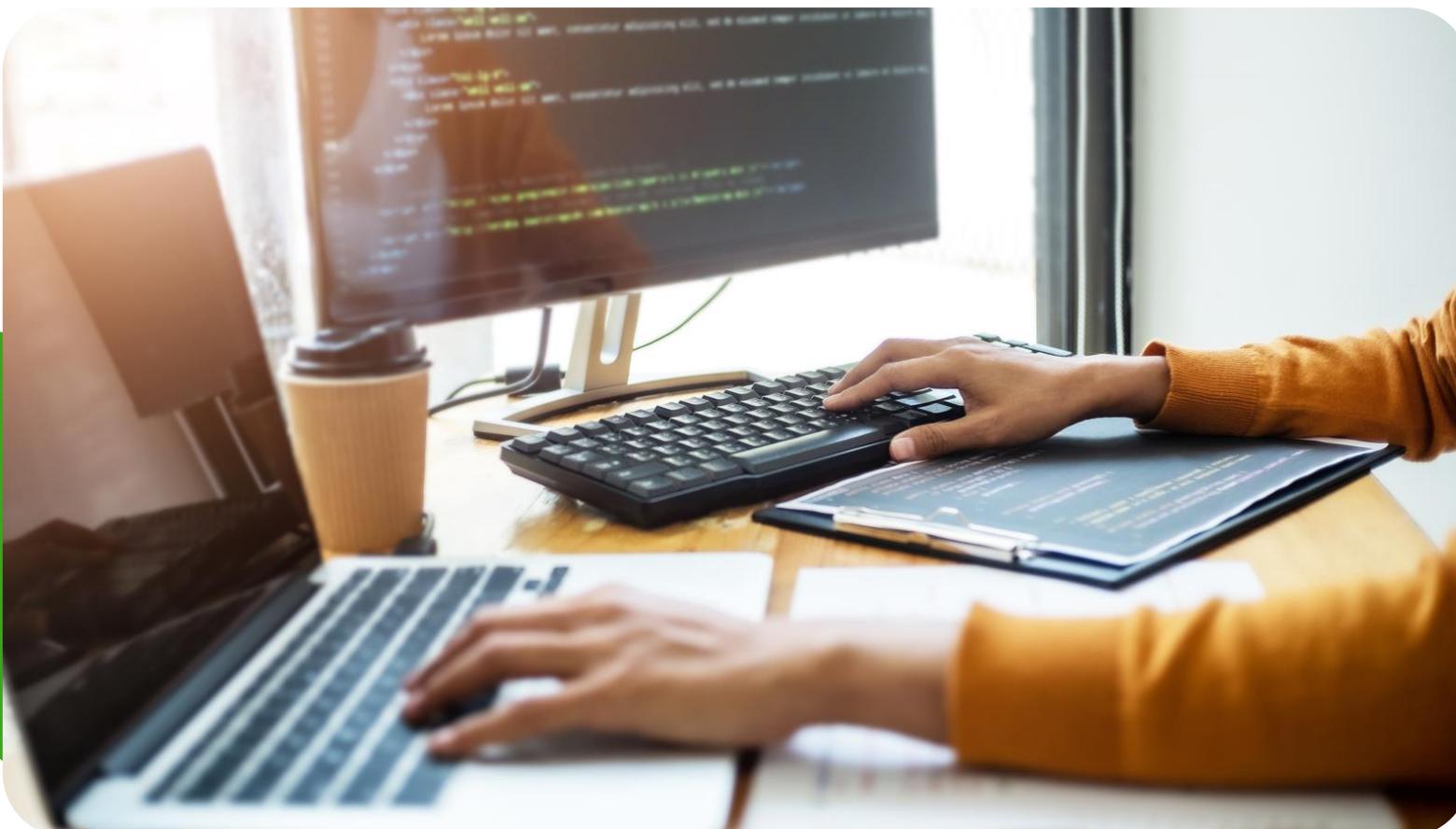
→ **Mentorship Sessions**

→ **Career pathway guidance**





WHY DATA ENGINEERING?

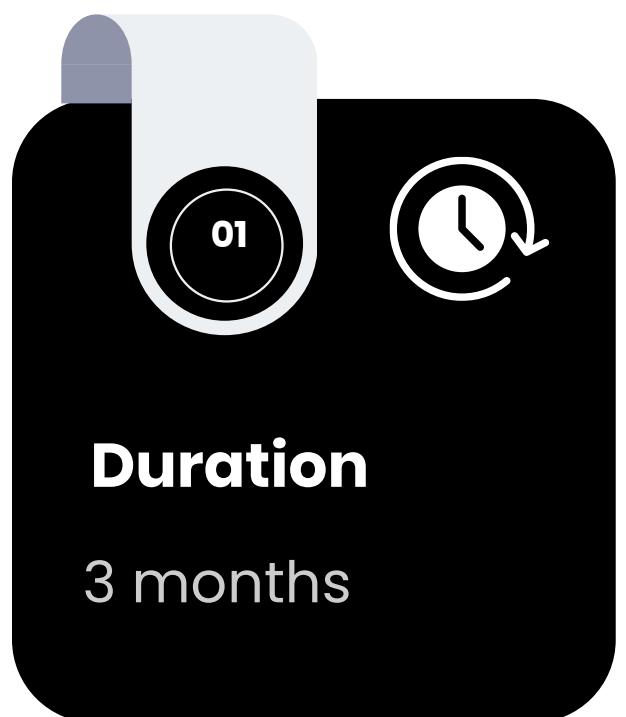


Data Engineering gives you the ability to transform raw, fragmented data into reliable, scalable systems that power analytics, AI, and business decision-making. In today's economy, organizations no longer just collect data; they need robust data infrastructures that can ingest, process, and deliver high-quality data in real time. This shift has made Data Engineering one of the most critical and high-leverage capabilities in modern organizations.

Learning Data Engineering equips you with the technical mastery to design, build, and maintain data pipelines and architectures. You move beyond basic data handling to engineering systems that integrate multiple data sources, ensure data quality, and enable seamless access for analytics and machine learning. By bridging the gap between raw data and usable insights, you turn complex data flows into dependable foundations for innovation.

Beyond strong career opportunities, Data Engineering empowers you to solve data-driven challenges at scale. It is a future-ready discipline that keeps you at the forefront of digital transformation, giving you the power not just to support data initiatives, but to architect the backbone of modern, intelligent organizations.

REQUIREMENTS

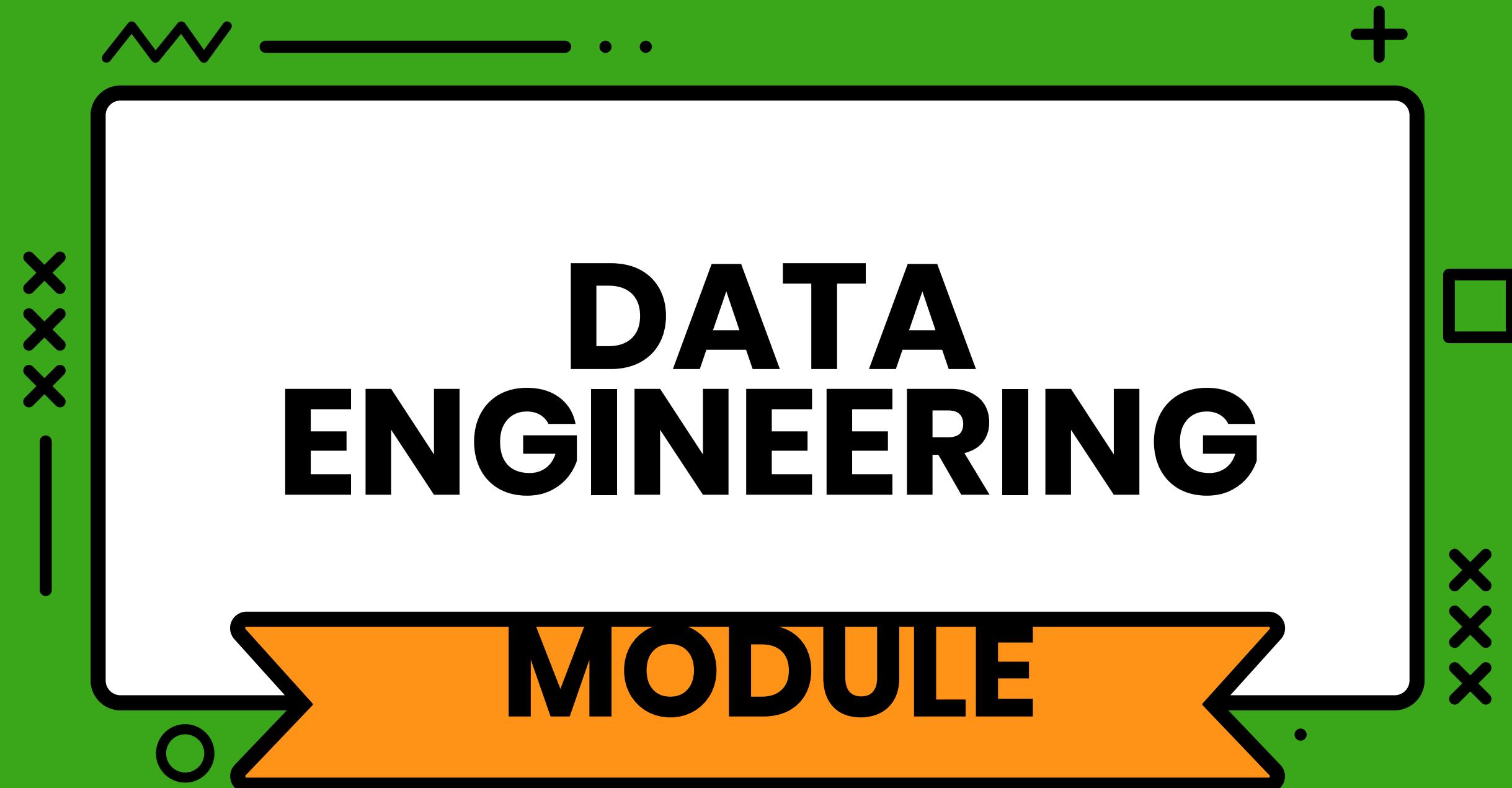


Your career will only grow to the level of the skills, discipline, and mindset you commit to building.



OUR CURRICULUM





DATA ENGINEERING

Module 1

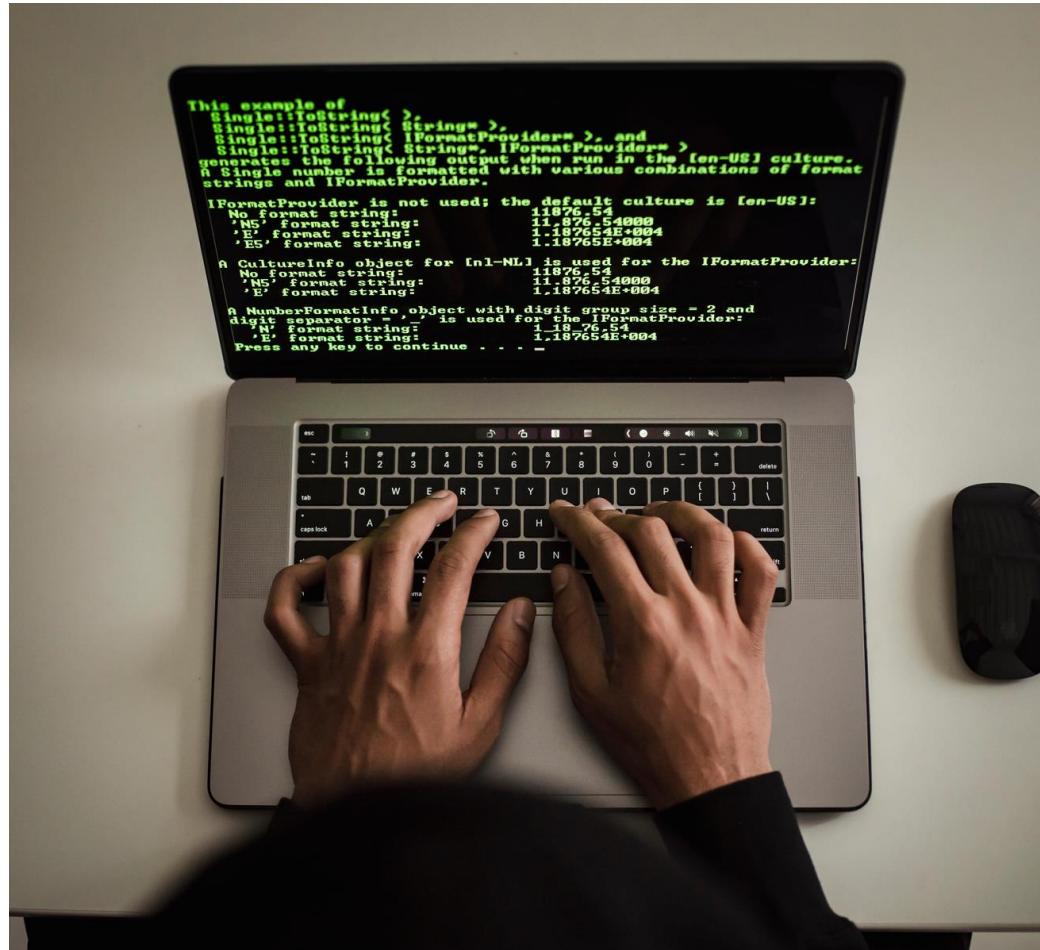
INTRODUCTION TO DATA ENGINEERING

- Who is a Data Engineer?
- Data Engineering vs Data Science vs Machine Learning
- Modern Data Stack
- Data Engineering Career Paths
- Key Tools & Technologies
- Data Lifecycle & Data Architecture
- Databases vs Data Warehouses vs Data Lakes

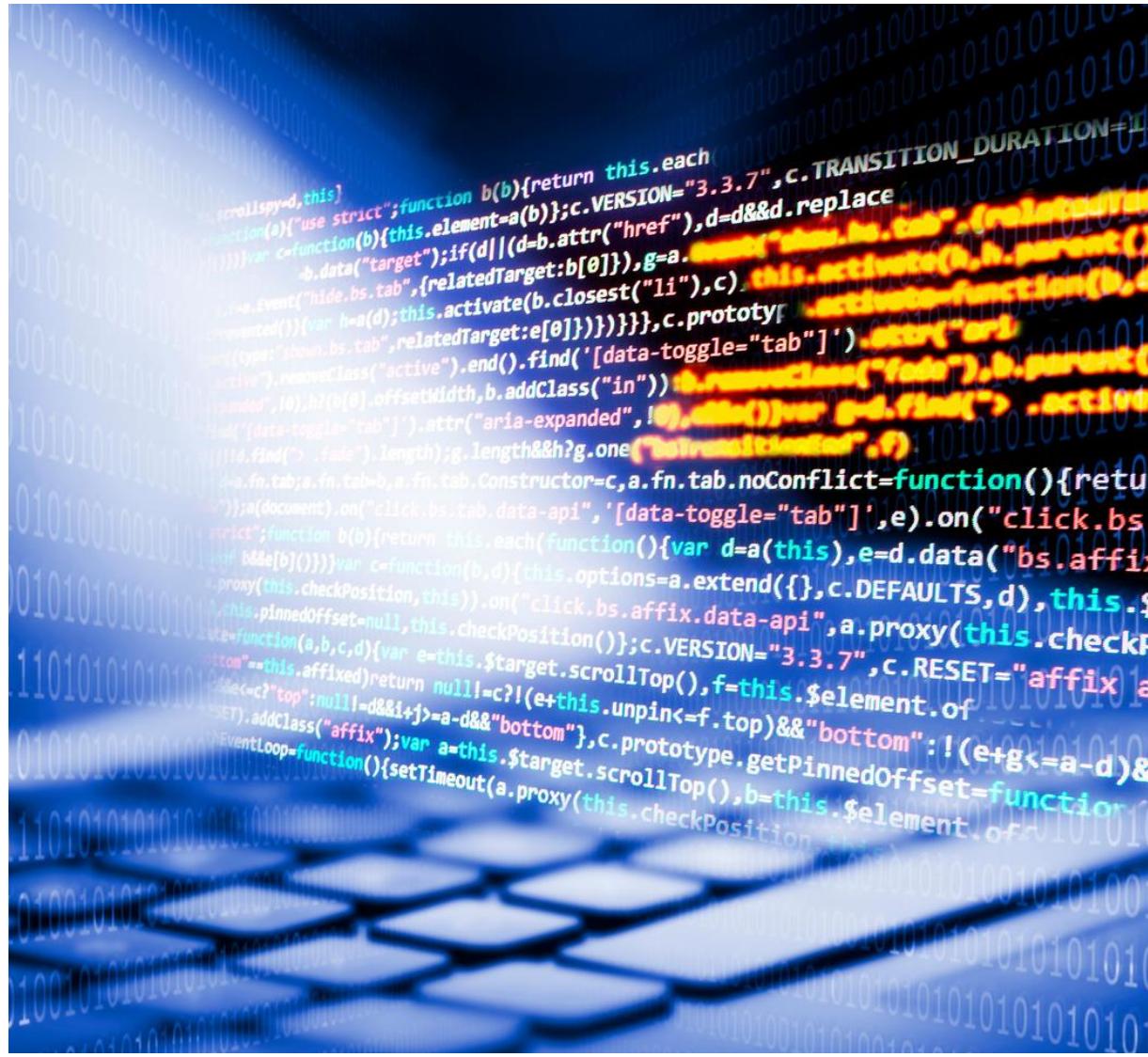
Hands-On

- Set up environment: Python, VS Code, Git, GitHub
- Explore sample datasets

Create your first data pipeline workflow
manually



DATA ENGINEERING



Module 2

PROGRAMMING FOR DATA ENGINEERS — PYTHON

- Python basics for data engineering
- Working with files: CSV, JSON, XML, Parquet
- Error handling, logging, virtual environments
- Data manipulation with Pandas
- Introduction to OOP
- Writing production-level Python scripts
- Understanding APIs (REST, SOAP)

Hands-On

- Build ETL scripts using Python
- Consume public APIs and save data
- Clean large datasets with Pandas

Create scheduled scripts

DATA ENGINEERING

Module 3

DATA BASES & SQL

- Relational Database Concepts
- SQL (Beginner to Advanced)
- Joins, Window Functions, CTEs, Views
- Indexing & Query Optimization
- PostgreSQL / MySQL
- NoSQL Databases: MongoDB, Cassandra
- Data Modeling for OLTP & OLAP
- Star & Snowflake Schema



Hands-On

- Design a data model for an E-commerce system
- Optimize slow SQL queries
- Create OLAP star schema
- Build a mini data warehouse in PostgreSQL

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Module 4



DATA WAREHOUSING & ETL/ELT

- Data Warehouse Architecture
- ETL vs ELT frameworks
- Dimensional Modeling
- Slowly Changing Dimensions
- Fact & Dimension Tables
- Partitioning & Clustering
- Cloud Data Warehouse: Snowflake / BigQuery / Redshift

Hands-On

- Build a full ETL pipeline using Python
- Load data into a cloud data warehouse
- Build SCD Type 1 & 2 transformations

DATA ENGINEERING



Module 5

CLOUD COMPUTING FOR DATA ENGINEERING

- AWS IAM
- S3 (object storage)
- EC2
- RDS
- Lambda Functions
- Glue
- Athena
- Cloud security basics

Hands-On

- Build a pipeline that extracts data → stores on S3 → loads to Redshift
- Trigger ETL with AWS Lambda
- Create automated Glue jobs

DATA ENGINEERING



Module 6 BIG DATA ENGINEERING

- Introduction to Big Data
- Hadoop Ecosystem
- HDFS
- MapReduce
- Spark Architecture
- PySpark
- Spark SQL
- Spark Optimization

Hands-On

- Process 5–10GB datasets with Spark
- Build and optimize Spark ETL pipelines

Run Spark jobs on AWS EMR

DATA ENGINEERING

Module 7

REAL-TIME DATA PIPELINES

- Kafka fundamentals
- Producers & Consumers
- Kafka Streams
- Real-time data processing concepts
- Streaming vs Batch
- Spark Streaming

Hands-On

- Build a real-time pipeline using Kafka
- Deploy streaming analytics with Spark Streaming

Module 8

DATA PIPELINE ORCHESTRATION

- Workflow Orchestration
- Apache Airflow
- DAGs
- Scheduling & monitoring pipelines
- Error handling & retries

Hands-On

- Build production-level Airflow DAG
- Schedule a pipeline to run daily
- Monitor DAG performance

Industries That Employ Data Engineering

- Technology and Software Companies
- Finance and Banking
- Healthcare and Pharmaceuticals
- E-commerce and Retail
- Telecommunications
- Manufacturing and Production
- Energy and Utilities
- Government and Public Sector
- Education and EdTech
- Media & Entertainment



WHY TRAIN WITH US?



**Practical, Job
Ready Training**



**Industry-
Standard Tools
& Technologies**



**Expert
Instructors With
Real Experience**



**Personalized
Mentorship &
Support**



**Flexible and
Beginner-Friendly**



**Certification
That Boosts
Your CV**



**Career
Guidance &
Portfolio
Development**



**Supportive
Community**

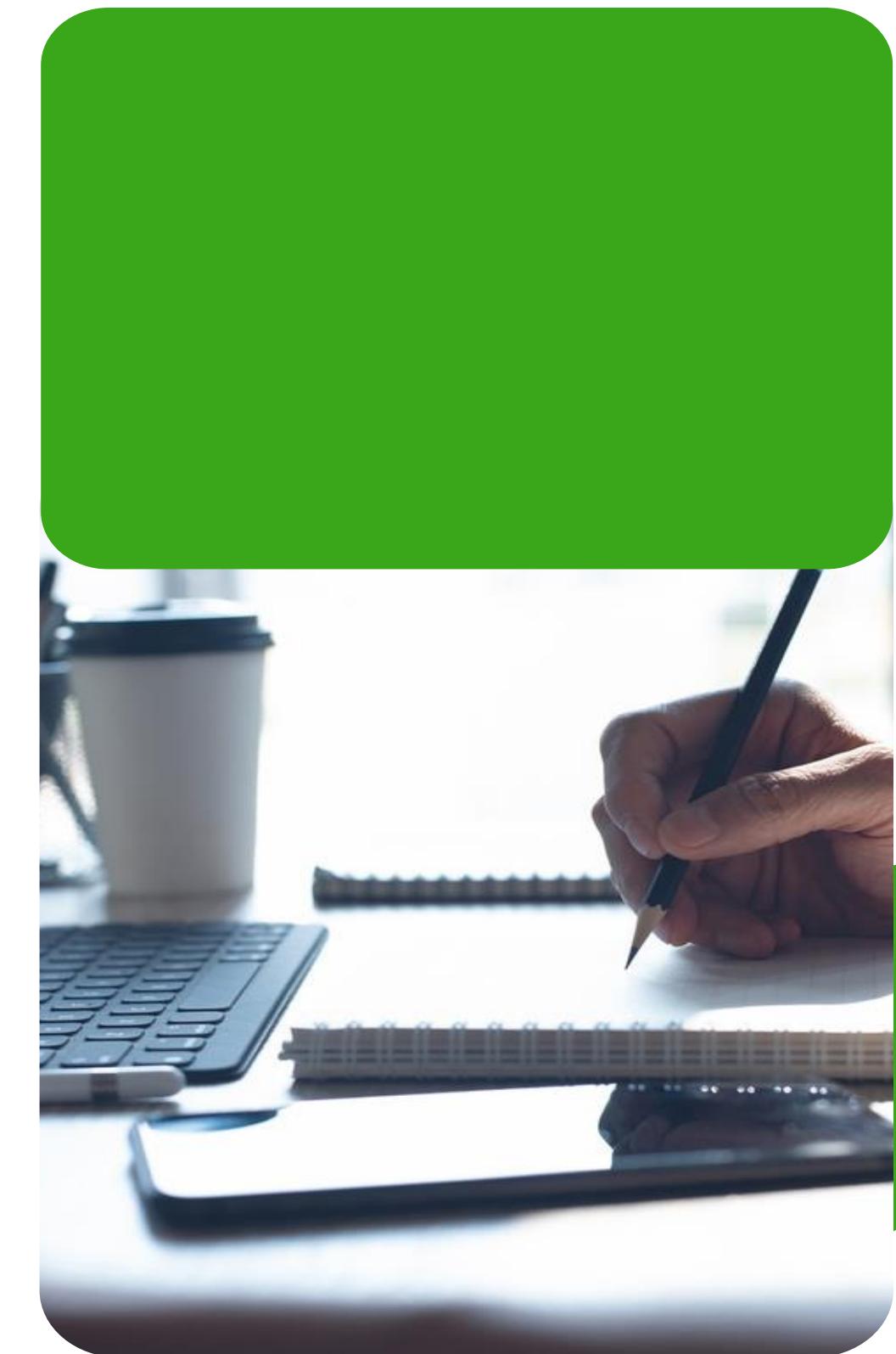


**Proven Success
Stories**



**Affordable
Quality Training**

Real world case studies



GROWTH INTERNSHIP PROGRAM





JOIN OUR NEXT COHORT



2026 TRAINING CALENDAR



January

10

Saturday

February

14

Saturday

March

14

Saturday

April

11

Saturday

May

09

Saturday

June

13

Saturday

July

11

Saturday

August

08

Saturday

September

12

Saturday

October

10

Saturday

November

14

Saturday

December

12

Saturday

PROGRAM FEES

Testimonial

The following are genuine testimonials that we have received from our past students who have proven the benefits of the services we have provided to them.



Sodiq



I've attended other online classes before, but Amdor Analytics stands out for me. The facilitator is engaging, the sessions are practical, and the support team is responsive. I feel like I'm part of a real community that wants me to succeed. I'm happy I made this choice



Chinasa Fabian-Ijeruh



Before joining Amdor Analytics, I had no prior tech background. Now, I can confidently analyze data and build reports. The facilitator is very supportive and always encourages us to practice. The training has made me believe that anyone can learn tech if they're in the right environment.



Chidimma Uzochukwu



It's been an eye-opening experience learning at Amdor Analytics. The way the facilitator breaks down each lesson into relatable examples makes learning easy. Even though the pace is fast sometimes, the explanations are clear, and the resources provided are excellent. I'm really grateful for this opportunity.

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CONTACT US



+234 811 408 7403



@amdoranalytics



www.amdoranalytics.io