

Customized Individual Training for Data Management & Governance -Data Architect

1. Introduction

In today's data-driven financial ecosystem, central banks rely on advanced data architectures, analytics, and AI systems to support monetary policy, financial stability, and regulatory oversight. This customized 15-day intensive training equips Data Architects/Engineers with practical and theoretical expertise in data governance, pipelines, warehousing, and AI applications using Python. The program integrates global standards (DAMA, ISO, TOGAF) with modern technologies such as Airflow, Kafka, Data Fabric, and Machine Learning to enable real-time, secure, and scalable financial data systems.

2. Objectives

The training aims to:

- i. Equip participants with data governance and architecture frameworks (DAMA, ISO, TOGAF)
- ii. Develop skills in building batch and streaming data pipelines
- iii. Enable design of scalable data warehouses for time-series financial data
- iv. Apply Python for analytics, simulation, and machine learning
- v. Build AI-driven Early Warning Systems for risk monitoring
- vi. Ensure compliance, auditability, and data quality in all processes

3. Training Areas & Duration Allocation (15 Days)

Training Area	Key Focus	Duration (days)
Data Management Ecosystem & Governance Frameworks	DAMA-DMBOK, ISO standards, TOGAF, data policies, governance models	2
Data Pipelines (Batch & Streaming)	Apache Airflow (DAGs)	2
Python Fundamentals, Python for Analytics & Simulation	Data Handling & Analysis: Numerical and statistical computations Pandas for data ingestion, cleaning, validation, and transformation, Trend and comparative analysis Exploratory Data Analysis (EDA); Data analysis (Pandas, NumPy), visualization, financial simulations	10
Capstone Project (End-to-End System)	Build full pipeline: ingestion → warehouse → ML → EWS dashboard	1

4. Training Outcomes

Upon completion, the participant will be able to:

- i. Design and implement enterprise-grade data architectures aligned with international standards
- ii. Build automated batch and real-time data pipelines using Airflow
- iii. Apply Python-based analytics for financial risk detection
- iv. Integrate advanced technologies (Graph analytics, RAG, Blockchain) into data ecosystems
- v. Ensure data quality, governance, auditability, and regulatory compliance

5. Expected Impact

This training will significantly enhance:

- i. Supervisory Oversight through real-time monitoring systems
- ii. Decision-Making via data-driven insights and predictive analytics
- iii. Operational Efficiency through automation of data workflows

- iv. Compliance & Governance aligned with global standards
- v. AI Innovation for risk management, fraud detection, and financial stability