

Big Data Engineering for Analytics: Architecting Solutions

IT & IT Engineering
Kigali (Rwanda)
07 - 11 Jul 2025

UK Traininig

PARTNER



Big Data Engineering for Analytics: Architecting Solutions

Ref: 3289_138038 **Date:** 07 - 11 Jul 2025 **Location:** Kigali (Rwanda) **Fees:** 3300 **Euro**

Course Description

This comprehensive 5-day course equips data professionals with the skills to design, implement, and manage big data solutions for analytics. Participants will learn to architect data lakes, build fault-tolerant distributed systems, and develop scalable data processing pipelines. The course covers essential big data technologies, best practices, and real-world applications.

Learning Objectives

- Design and implement scalable big data architectures for analytics
- Build and manage data lakes using various storage technologies
- Develop efficient data processing pipelines using distributed computing frameworks
- Apply best practices for data governance, security, and quality in big data environments
- Integrate big data solutions with analytics and machine learning workflows

Course Modules

Day 1: Introduction to Big Data Engineering

- Big data concepts and ecosystem overview
- Data engineering fundamentals and best practices
- Introduction to distributed systems and parallel processing
- Big data architecture patterns and use cases

Day 2: Data Storage and Management

- Data lake design and implementation
- Distributed file systems HDFS, S3
- NoSQL databases for big data MongoDB, Cassandra
- Data modeling and schema design for big data

Day 3: Data Processing and Analytics

- Batch processing with MapReduce and Hadoop
- Stream processing with Apache Kafka and Spark Streaming
- SQL on big data with Hive and Presto
- Machine learning at scale with Spark MLlib

Day 4: Data Pipelines and Workflow Management

The logo for UK Training Partner, featuring the text 'UK Training' in a smaller font above the word 'PARTNER' in a large, bold, black font. The background of the logo is a stylized chessboard with a king piece and a pawn piece.

- ETL and data integration for big data
- Workflow orchestration with Apache Airflow
- Data quality and validation techniques
- Monitoring and optimization of data pipelines

Day 5: Advanced Topics and Best Practices

- Data governance and security in big data environments
- Performance tuning and optimization techniques
- Real-time analytics and dashboarding
- Case studies and practical applications

Practical Wins for Participants

- Design and implement a scalable data lake architecture
- Build an end-to-end data processing pipeline using distributed frameworks
- Develop a real-time analytics solution for streaming data
- Create a data governance strategy for a big data environment

A graphic of a chessboard with several chess pieces. A large gold king piece is in the foreground, with a silver pawn and a silver knight behind it. The board has a checkered pattern, and there are concentric circles in the background.

UK Training
PARTNER

Blackbird training cities



Accra (Ghana)

Amman (Jordan)

Amsterdam (Netherlands)

Annecy (France)

Baku (Azerbaijan)

Bali (Indonesia)

Bangkok (Thailand)

Bangkok (Thailand)

Barcelona (Spain)

Batumi (Georgia)

Beijing (China)

Beirut (Lebanon)

Berlin (Germany)

Birmingham (UK)

Bordeaux (France)

Boston, Massachusetts (USA)

Brussels (Belgium)

Cairo (Egypt)

Cape Town (South Africa)

Casablanca (Morocco)

Cascais (Portugal)

Copenhagen (Denmark)

Doha (Qatar)

Dubai (UAE)

Düsseldorf (Germany)

UK Training
PARTNER



Blackbird Training Category



Human Resource



Audit & Quality Assurance



Finance, Accounting, Budgeting



Marketing, Sales, Customer Service



Secretary & Admin



Law and Contract Management



Project Management



IT & IT Engineering



Supply Chain & Logistics



Management & Leadership



Professional Skills



Oil & Gas Engineering



Health & Safety



Telecom Engineering



Hospital Management



Customs & Safety



Aviation



C-Suite Training



Agile and Refinement



Blackbird training Clients



MANNAI Trading
Company WLL,
Qatar



Alumina Corporation
Guinea



Booking.com
Netherlands



Oxfam GB International
Organization,
Yemen



Capital Markets
Authority,
Kuwait



Waltersmith Petroman Oil Limited
Nigeria



Qatar National Bank
(QNB),
Qatar



Qatar Foundation,
Qatar



AFRICAN UNION ADVISORY
BOARD ON CORRUPTION,
Tanzania



KFAS
Kuwait



Reserve Bank of
Malawi,
Malawi



Central Bank of Nigeria
Nigeria



Ministry of Interior
Kingdom of Saudi Arabia
KSA



Mabruk Oil Company
Libya



Saudi Electricity
Company,
KSA



BADAN PENGELOLA
KEUANGAN Haji,
Indonesia



NATO
Italy



ENI CORPORATE
UNIVERSITY,
Italy



Gulf Bank
Kuwait



General Organization for
Social Insurance
KSA



Defence Space Administration
Nigeria



National Industries
Group (Holding),
Kuwait



Hamad Medical
Corporation,
Qatar



USAID
Pakistan



STC Solutions,
KSA



North Oil company,



EKO Electricity



Oman Broadband



UNITED NATIONS
UN.



Authority for

UK Training
PARTNER



LONDON TRAINING PROVIDER



www.blackbird-training.com



training@blackbird-training.com



+44 7480 775526 / +44 7401 177335