Datastat Research
Building Capacity in Training and Research

DATASTAT TRAINING IN

OFFICIAL COURSE PROSPECTUS

Center for Advanced Research & Professional Development

Nairobi Training Center • Global Virtual Academy • Corporate On-Site

ACCOUNTING AND FINANCE

Big Data Analytics for Banking and Financial Services Training Course

Comprehensive Course Syllabus, Practical Modules & Upcoming Schedules

PROGRAM SPECIFICATIONS & HIGHLIGHTS

- **DURATION**
  5 Days Practical Hands-on
- **DELIVERY MODES**
  In-Person Class & Live Virtual
- **CERTIFICATION**
  Accredited Certificate of Completion
- **INTAKES / DATES**
  Multiple Cohort Schedules Included

PREPARED FOR:

Valued Participant

Email: training@datastatresearch.org | Issued: November 24, 2026

Academic & Professional Training Year: 2026

DATASTAT TRAINING INSTITUTE

P.O. Box 102802-00101, Nairobi, Kenya

Training Centers: Nairobi • Mombasa • Kigali • Dubai • Live Virtual Academy

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www.datastatresearch.org

Big Data Analytics for Banking and Financial Services Training Course

Accounting and Finance • 5 Days Intensive • Accredited Certification

Course Overview

Big Data Analytics for Banking and Financial Services Training Course is designed to equip banking professionals, financial analysts, data scientists, and technology specialists with advanced knowledge and practical skills for leveraging big data technologies to transform financial operations.

Key Skills & Software Tools Covered

MS Word • Apache Hadoop • Apache Spark • and Tableau

Upcoming Training Schedules

Confirmed cohort intakes and venues. Both physical in-person classroom and live virtual online seats are available.

TRAINING DATES	LOCATION / VENUE	FORMAT / DURATION	INVESTMENT (FEE)
30 Nov 2026 – 4 Dec 2026	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
7 Dec 2026 – 11 Dec 2026	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
14 Dec 2026 – 18 Dec 2026	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
21 Dec 2026 – 25 Dec 2026	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
28 Dec 2026 – 1 Jan 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
4 Jan 2027 – 8 Jan 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
11 Jan 2027 – 15 Jan 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
18 Jan 2027 – 22 Jan 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
25 Jan 2027 – 29 Jan 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
1 Feb 2027 – 5 Feb 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
8 Feb 2027 – 12 Feb 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
15 Feb 2027 – 19 Feb 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
22 Feb 2027 – 26 Feb 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
1 Mar 2027 – 5 Mar 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
8 Mar 2027 – 12 Mar 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
15 Mar 2027 – 19 Mar 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
22 Mar 2027 – 26 Mar 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
29 Mar 2027 – 2 Apr 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
5 Apr 2027 – 9 Apr 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
12 Apr 2027 – 16 Apr 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
19 Apr 2027 – 23 Apr 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
26 Apr 2027 – 30 Apr 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**

3 May 2027 – 7 May 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
10 May 2027 – 14 May 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
17 May 2027 – 21 May 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
24 May 2027 – 28 May 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
31 May 2027 – 4 Jun 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
7 Jun 2027 – 11 Jun 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
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2 Aug 2027 – 6 Aug 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
9 Aug 2027 – 13 Aug 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
16 Aug 2027 – 20 Aug 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
23 Aug 2027 – 27 Aug 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
30 Aug 2027 – 3 Sep 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
6 Sep 2027 – 10 Sep 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
13 Sep 2027 – 17 Sep 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
20 Sep 2027 – 24 Sep 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
27 Sep 2027 – 1 Oct 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
4 Oct 2027 – 8 Oct 2027	Nairobi	Classroom / 5d	**$1,500 USD / KES 110,000**
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* Corporate discounts and customized cohort scheduling are available for teams of 3 or more participants.

Course Curriculum & Modules

Big Data Analytics for Banking and Financial Services Training Course

Introduction

Big Data Analytics for Banking and Financial Services Training Course is designed to equip banking professionals, financial analysts, data scientists, and technology specialists with advanced knowledge and practical skills for leveraging big data technologies to transform financial operations. As financial institutions increasingly adopt digital banking, artificial intelligence, machine learning, predictive analytics, and cloud computing, the ability to process, analyse, and interpret massive datasets has become essential for achieving operational efficiency, improving customer experience, strengthening risk management, and maintaining regulatory compliance. This course explores modern big data analytics frameworks, financial data engineering, data mining, real-time analytics, and business intelligence solutions that support data-driven decision-making across banking and financial services.

Participants will develop practical competencies in applying big data analytics to credit risk assessment, fraud detection, anti-money laundering, customer segmentation, financial forecasting, and portfolio optimisation. The programme also examines data governance, cybersecurity, privacy protection, regulatory reporting, and emerging financial technology trends. Through international banking case studies, practical exercises, and industry-based applications, participants will learn how to transform complex financial datasets into actionable business intelligence, improve financial performance, and build competitive advantages through scalable and responsible data analytics strategies.

Course Objectives

By the end of this course, participants will be able to:

- Understand big data architecture and its applications in modern banking.
- Apply advanced data analytics to financial decision-making.
- Develop predictive models for credit risk assessment.
- Implement machine learning techniques for financial forecasting.
- Strengthen fraud detection using real-time analytics.
- Apply data mining for customer behaviour analysis.
- Utilise artificial intelligence in digital banking operations.
- Implement scalable financial data management frameworks.
- Improve anti-money laundering monitoring through analytics.
- Strengthen data governance, cybersecurity, and privacy protection.
- Develop interactive financial dashboards and business intelligence reports.
- Apply cloud-based big data processing technologies.
- Support regulatory compliance through advanced financial analytics.

Organizational Benefits

- Improved operational efficiency through data-driven automation.
- Enhanced fraud prevention and financial crime detection.
- Stronger credit risk management and assessment.
- Improved customer retention and personalised banking.
- Faster and more accurate financial decision-making.
- Reduced operational costs through predictive analytics.
- Enhanced regulatory reporting and compliance.
- Improved financial forecasting and profitability.
- Stronger data security and governance frameworks.
- Increased competitiveness through digital transformation.

Target Audiences

- Banking executives and senior financial managers.
- Financial analysts and investment professionals.
- Data scientists and data analysts.

- Risk management and compliance officers.
- Banking technology and IT professionals.
- Credit analysts and loan portfolio managers.
- Business intelligence and reporting specialists.
- Fintech professionals and digital banking consultants.

Course Duration: 10 days

Course Modules

Module 1: Fundamentals of Big Data Analytics in Banking

- Understanding big data concepts, characteristics, and financial applications.
- Exploring structured, semi-structured, and unstructured banking data.
- Understanding the five Vs of big data analytics.
- Examining financial data sources and digital banking ecosystems.
- Exploring big data opportunities in commercial and retail banking.
- Case study: JPMorgan Chase's application of data analytics in banking operations.

Module 2: Big Data Architecture and Infrastructure

- Understanding distributed computing and scalable data architecture.
- Exploring Hadoop, Spark, and distributed storage systems.
- Understanding data lakes, data warehouses, and lakehouse architecture.
- Designing scalable financial data processing environments.
- Integrating banking databases with big data platforms.
- Case study: HSBC's use of advanced data infrastructure for financial services.

Module 3: Financial Data Collection and Integration

- Understanding banking data acquisition and integration techniques.
- Working with transactional, customer, and market datasets.
- Applying Extract, Transform, Load and Extract, Load, Transform processes.
- Integrating Application Programming Interfaces and financial databases.
- Implementing data quality and validation frameworks.
- Case study: Standard Chartered's digital data integration initiatives.

Module 4: Data Mining and Customer Behaviour Analytics

- Applying data mining techniques to financial datasets.
- Conducting customer segmentation and profiling.
- Analysing customer spending and transaction patterns.
- Identifying cross-selling and upselling opportunities.
- Developing customer lifetime value models.
- Case study: Capital One's application of analytics for personalised customer services.

Module 5: Machine Learning for Banking Analytics

- Understanding supervised and unsupervised learning.
- Applying classification and regression algorithms.
- Developing machine learning models for financial predictions.
- Evaluating model accuracy and performance.
- Understanding responsible artificial intelligence in banking.
- Case study: PayPal's application of machine learning for transaction analysis.

Module 6: Credit Risk Assessment and Predictive Analytics

- Understanding credit risk modelling and financial indicators.
- Developing predictive credit scoring models.
- Analysing borrower behaviour and repayment patterns.
- Applying analytics to loan default prediction.

- Monitoring credit portfolios using automated analytics.
- Case study: Zest AI's application of machine learning in credit underwriting.

Module 7: Fraud Detection and Financial Crime Analytics

- Understanding financial fraud patterns and emerging threats.
- Applying anomaly detection to banking transactions.
- Developing real-time fraud detection models.
- Identifying suspicious transaction behaviours.
- Implementing predictive financial crime monitoring.
- Case study: Mastercard's use of artificial intelligence for payment fraud detection.

Module 8: Anti-Money Laundering and Regulatory Analytics

- Understanding anti-money laundering data requirements.
- Applying analytics to suspicious transaction monitoring.
- Identifying money laundering patterns and financial networks.
- Automating compliance reporting and alerts.
- Strengthening Know Your Customer analytics.
- Case study: Danske Bank's financial crime monitoring and compliance challenges.

Module 9: Real-Time Data Processing and Stream Analytics

- Understanding real-time banking data architectures.
- Exploring Apache Kafka and Spark Streaming.
- Processing high-volume financial transactions.
- Developing real-time monitoring dashboards.
- Implementing event-driven financial analytics.
- Case study: Visa's real-time payment fraud monitoring capabilities.

Module 10: Financial Forecasting and Predictive Modelling

- Applying time-series analysis to financial datasets.
- Forecasting revenue, cash flows, and liquidity requirements.
- Analysing interest rates and market movements.
- Developing predictive financial performance models.
- Evaluating forecasting accuracy and business outcomes.
- Case study: Goldman Sachs' application of quantitative analytics in financial markets.

Module 11: Business Intelligence and Financial Visualisation

- Developing interactive banking performance dashboards.
- Applying Power BI and Tableau for financial reporting.
- Visualising customer, credit, and transaction data.
- Developing key performance indicators and executive reports.
- Translating analytical findings into strategic insights.
- Case study: DBS Bank's digital banking analytics and customer insights.

Module 12: Cloud Computing and Big Data Platforms

- Understanding cloud-based financial data infrastructure.
- Exploring Amazon Web Services, Microsoft Azure, and Google Cloud.
- Implementing scalable cloud data storage solutions.
- Managing cloud-based financial analytics workloads.
- Evaluating cloud security and cost optimisation.
- Case study: Capital One's migration towards cloud-based banking infrastructure.

Module 13: Data Governance, Privacy, and Cybersecurity

- Establishing financial data governance frameworks.
- Understanding data privacy and protection requirements.

- Implementing access controls and encryption mechanisms.
- Managing data lineage, integrity, and audit trails.
- Addressing cybersecurity risks in big data environments.
- Case study: European banking institutions implementing General Data Protection Regulation compliance.

Module 14: Advanced Analytics for Investment and Portfolio Management

- Applying big data analytics to investment decisions.
- Analysing market trends and portfolio performance.
- Developing quantitative investment strategies.
- Applying predictive analytics to asset allocation.
- Evaluating portfolio risk and optimisation models.
- Case study: BlackRock's Aladdin platform for investment and risk analytics.

Module 15: Big Data Strategy and Digital Transformation in Banking

- Developing enterprise-wide big data strategies.
- Integrating analytics into digital banking transformation.
- Evaluating analytics return on investment.
- Building data-driven organisational cultures.
- Identifying emerging trends in financial technology and artificial intelligence.
- Case study: BBVA's digital transformation through advanced data analytics.

Training Methodology

- Interactive presentations and expert-led discussions.
- Practical exercises using banking and financial datasets.
- Real-world international banking case study analysis.
- Group projects and collaborative problem-solving.
- Demonstrations of big data analytics software and platforms.
- Practical simulations involving fraud detection and credit risk modelling.
- Financial analytics dashboard development exercises.
- Knowledge assessments and individual presentations.

Register as a group from 3 participants for a Discount

Send us an email: info@datastatresearch.org or call +254724527104

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to DATASTAT CONSULTANCY LTD account, as indicated in the invoice so as to enable us prepare better for you.

Certification & Learning Methodology

- Hands-on practical delivery with real-world datasets, case studies, and lab exercises.
- Post-training mentorship, access to class resources, and customized follow-up support.
- Participants who successfully complete the course receive an accredited Datastat Certificate of Completion.

How to Enroll & Reserve Your Seat

1. Online Registration: Visit https://datastatresearch.org/courses/big-data-analytics-for-banking-and-financial-services-training-course to register online.
2. Email Booking: Send participant details to training@datastatresearch.org for official invoice & reservation.
3. Support & Assistance: Inquire via phone +254 724 527 104 | +254 734 969 612.