Analyzing Big Datasets for M&E Training Course

Professional Development Training Course Outline

Category	Monitoring and Evaluation	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Analyzing Big Datasets for M&E Training Course provides an advanced, hands-on approach to handling large-scale data, transforming raw datasets into actionable insights, and driving evidence-based decision-making. Participants will learn to leverage cutting-edge analytical tools, integrate multiple data sources, and apply advanced statistical techniques to enhance program performance and impact assessment. Emphasis is placed on practical application, ensuring learners can immediately apply skills to real-world M&E challenges.

Through this training, participants will master data cleaning, visualization, predictive analytics, and real-time monitoring, all while adhering to ethical data standards and ensuring data quality. The course combines interactive lectures, practical exercises, and case studies from diverse sectors, including health, education, agriculture, and social programs. By the end, learners will have the confidence to manage, interpret, and report on large datasets, enabling organizations to optimize strategies, improve accountability, and scale impact.

Programme Curriculum

Analyzing Big Datasets for M&E Training Course

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Course Objectives

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

1. Master big data analytics techniques for M&E.
2. Perform data cleaning and preprocessing on large datasets.
3. Apply predictive modeling to forecast program outcomes.
4. Conduct trend and pattern analysis using advanced statistical tools.
5. Integrate multiple data sources for comprehensive insights.
6. Utilize data visualization to communicate findings effectively.
7. Implement real-time monitoring dashboards for program tracking.
8. Apply machine learning algorithms for M&E data.
9. Conduct comparative and longitudinal analyses for program evaluation.
10. Ensure data quality, integrity, and ethical compliance.
11. Develop actionable recommendations based on insights.
12. Handle unstructured and semi-structured datasets efficiently.
13. Interpret key performance indicators (KPIs) for decision-making.

Target Audience

1. Monitoring & Evaluation Specialists
2. Data Analysts and Data Scientists
3. Program Managers and Coordinators
4. Government and NGO M&E Officers
5. Research Analysts in social and economic sectors
6. Policy and Impact Evaluation Experts
7. Consultants working with large datasets
8. Professionals aiming to upskill in big data for M&E

Course Modules

Module 1: Introduction to Big Data in M&E

- Understanding the big data ecosystem
- Importance of data-driven decision-making
- Types and sources of structured and unstructured data
- Challenges in managing large datasets
- Case Study: Big data integration in health program monitoring

Module 2: Data Cleaning and Preprocessing

- Identifying missing values and outliers

- Techniques for data normalization and standardization
- Handling duplicate and inconsistent records
- Using ETL tools for preprocessing
- Case Study: Cleaning large-scale education survey data

Module 3: Data Integration and Transformation

- Combining multiple datasets for comprehensive analysis
- Using data warehouses and cloud platforms
- Transforming raw data into analytical datasets
- Managing real-time and batch data streams
- Case Study: Integrating agricultural datasets for seasonal forecasting

Module 4: Exploratory Data Analysis (EDA)

- Identifying patterns, trends, and anomalies
- Using statistical summaries and correlation analysis
- Visualizing data distributions and relationships
- Leveraging Python/R for EDA
- Case Study: Trend analysis of social program participation

Module 5: Advanced Analytics Techniques

- Applying regression and predictive modeling
- Introduction to clustering and segmentation
- Time series analysis for program monitoring
- Using classification algorithms for outcome prediction
- Case Study: Predictive analytics for disease outbreak monitoring

Module 6: Data Visualization and Reporting

- Designing interactive dashboards
- Communicating findings with charts, graphs, and heatmaps
- Storytelling with data narratives
- Tools: Tableau, Power BI, and Python libraries
- Case Study: Impact visualization in multi-sector development programs

Module 7: Real-Time Monitoring and Dashboards

- Creating dynamic dashboards for M&E
- Integrating API and IoT data
- Automating alerts and notifications
- Monitoring key performance indicators in real time
- Case Study: Real-time monitoring of water and sanitation projects

Module 8: Ethical, Quality, and Governance Considerations

- Ensuring data privacy and confidentiality
- Implementing quality assurance protocols
- Addressing bias and integrity in big datasets
- Compliance with international data standards
- Case Study: Ethical handling of sensitive population data

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

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 Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com