



STRATEGIC AI AND MACHINE LEARNING FOR DATA LEADERS TRAINING COURSE

15 - 19 Nov 2026

MANAMA

4400 € (PER PERSON)

REF: #DM9835_222752



COURSE INTRODUCTION / OVERVIEW:

This course provides a comprehensive roadmap for data managers and leaders to navigate the transformative landscape of Artificial Intelligence (AI) and Machine Learning (ML). In an era where data is the most valuable asset, leveraging AI and ML is no longer an option but a strategic imperative for competitive advantage. This program, offered by BIG BEN Training Center, is meticulously designed to bridge the gap between technical data science concepts and strategic business application. We move beyond the theoretical to provide actionable insights on how to build, manage, and scale AI capabilities within your organization. Drawing on principles from seminal works like "Pattern Recognition and Machine Learning" by Christopher M. Bishop, the curriculum explores the entire AI project lifecycle, from data preparation and model selection to deployment and governance. Participants will learn to identify high-impact use cases, build a robust data infrastructure, and lead teams to execute AI initiatives successfully. This course empowers data managers to transition from traditional data oversight to becoming strategic leaders who drive innovation and data-driven decision-making through the intelligent application of AI and ML, ensuring their organization remains at the forefront of technological advancement.

TARGET AUDIENCE / THIS TRAINING COURSE IS SUITABLE FOR:

- Data Managers and Directors.
- IT Managers and Team Leaders.
- Business Intelligence (BI) Professionals and Analysts.
- Data Governance Specialists.
- Project Managers overseeing data-centric projects.
- Aspiring Data Leaders and Strategists.
- Data Architects and Senior Data Analysts.
- Heads of Analytics and Data Science.



TARGET SECTORS AND INDUSTRIES:

- Financial Services and Banking.
- Healthcare and Pharmaceuticals.
- Retail and E-commerce.
- Technology and Telecommunications.
- Manufacturing and Supply Chain Logistics.
- Government and Public Sector Agencies.
- Energy and Utilities.
- Consulting and Professional Services.

TARGET ORGANIZATIONS DEPARTMENTS:

- Information Technology (IT) and Data Management.
- Business Intelligence and Analytics.
- Operations and Logistics.
- Marketing and Customer Insights.
- Research and Development (R&D).
- Finance and Risk Management.
- Strategic Planning and Corporate Development.
- Product Management.



COURSE OFFERINGS:

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

- Develop a strategic roadmap for integrating AI and ML into data management practices.
- Evaluate various machine learning models and select the appropriate ones for specific business problems.
- Master the principles of data preparation, cleaning, and feature engineering for AI applications.
- Implement robust AI governance and ethical frameworks to ensure responsible AI deployment.
- Manage the end-to-end lifecycle of an AI/ML project from conception to production.
- Lead and build high-performing data science and AI teams within an organization.
- Effectively communicate the value and ROI of AI initiatives to senior stakeholders.
- Identify and mitigate risks associated with AI implementation, including bias and security.
- Leverage cloud-based AI platforms and tools for scalable machine learning solutions.
- Analyze future trends in AI and ML to inform long-term data strategy.

COURSE METHODOLOGY:

The training methodology at BIG BEN Training Center is designed to be immersive, practical, and highly interactive, ensuring that participants not only learn the theory but can also apply it directly to their professional roles. We employ a blended learning approach that combines expert-led instruction with hands-on, practical application. The course is built around real-world case studies from various industries, allowing participants to analyze complex scenarios and develop strategic solutions. Collaborative group workshops and team-based projects encourage peer-to-peer learning and the exchange of diverse perspectives. Interactive sessions, including Q&A panels and facilitated discussions, ensure that every participant is actively engaged in the learning process. Practical exercises will guide attendees through the stages of developing an AI strategy, from identifying business needs to creating a governance plan. Our expert instructors provide continuous feedback and personalized coaching, helping participants to build confidence and master the skills needed to lead AI and ML initiatives. This dynamic and engaging environment ensures a deep and lasting understanding of how to strategically leverage AI for superior data management.



COURSE AGENDA (COURSE UNITS):

UNIT ONE: THE STRATEGIC IMPERATIVE OF AI IN DATA MANAGEMENT

- Introduction to Artificial Intelligence, Machine Learning, and Deep Learning.
- The evolution from traditional data management to AI-driven strategies.
- Assessing organizational readiness for AI adoption.
- Identifying high-impact AI and ML use cases for data management.
- Understanding the business value and ROI of AI initiatives.
- The role of the data manager in the age of AI.
- Key terminology and foundational concepts for leaders.

UNIT TWO: BUILDING THE FOUNDATION FOR AI SUCCESS

- Data strategy and governance for machine learning.
- Techniques for data acquisition, cleaning, and preparation.
- The importance of data quality and its impact on model performance.
- Introduction to feature engineering and data transformation.
- Building a scalable data infrastructure and architecture.
- Data security and privacy considerations in AI projects.
- Tools and platforms for modern data management.

UNIT THREE: CORE MACHINE LEARNING MODELS FOR DATA MANAGERS

- Understanding supervised learning: regression and classification.
- Practical applications of supervised learning in business.
- Exploring unsupervised learning: clustering and association.
- Using unsupervised learning for customer segmentation and anomaly detection.
- Introduction to reinforcement learning concepts.
- Evaluating model performance: key metrics for managers.
- Avoiding common pitfalls like overfitting and underfitting.



UNIT FOUR: ADVANCED AI CONCEPTS AND PROJECT DEPLOYMENT

- Introduction to deep learning and neural networks.
- Natural Language Processing (NLP) for unstructured data insights.
- Computer vision applications and use cases.
- The principles of Machine Learning Operations (MLOps).
- Managing the AI project lifecycle from pilot to production.
- Strategies for model deployment, monitoring, and maintenance.
- Scaling AI solutions across the enterprise.

UNIT FIVE: AI GOVERNANCE, ETHICS, AND LEADERSHIP

- Developing a robust AI governance framework.
- Addressing ethical considerations: fairness, accountability, and transparency.
- Identifying and mitigating bias in AI models.
- Building and leading effective data science and AI teams.
- Communicating AI concepts and results to non-technical stakeholders.
- Change management for successful AI integration.
- Future trends and the long-term vision for AI in business.

FAQ:

QUALIFICATIONS REQUIRED FOR REGISTERING TO THIS COURSE?

There are no requirements.

HOW LONG IS EACH DAILY SESSION, AND WHAT IS THE TOTAL NUMBER OF TRAINING HOURS FOR THE COURSE?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.



SOMETHING TO THINK ABOUT:

As AI automates more data management tasks, what is the evolving strategic role of the human data manager beyond mere oversight?

WHAT UNIQUE QUALITIES DOES THIS COURSE OFFER COMPARED TO OTHER COURSES?

This course is uniquely positioned for data managers and leaders, focusing on strategy and governance rather than pure technical implementation. While many courses teach the "how" of coding machine learning models, our program emphasizes the "why" and "what" from a leadership perspective. We equip participants with the strategic acumen to identify high-value AI opportunities, build a compelling business case, and navigate the complex organizational changes required for successful adoption. The curriculum is built around a managerial framework, addressing critical topics like ROI analysis, risk management, AI ethics, and team leadership, which are often overlooked in technically-focused training. The content is designed to bridge the communication gap between technical data science teams and executive stakeholders. Instead of just learning about algorithms, participants will master the art of asking the right questions, evaluating model outputs for business impact, and building a sustainable, ethical AI culture within their organization. This strategic, leadership-centric approach ensures that graduates are prepared not just to manage data, but to lead their organizations into a new era of data-driven innovation.