Strategic AI and Data Science Project Management Training Course

30 Nov - 04 Dec 2026

Cape town

4600 € (Per Person)

Ref: #AI3897_291515

Course Introduction / Overview:

This course provides a comprehensive framework for navigating the complexities of AI and data science projects, which fundamentally differ from traditional software development. It addresses the unique lifecycle, inherent uncertainties, and strategic imperatives of data-driven initiatives. Participants will learn to bridge the gap between technical data science teams and business stakeholders, ensuring projects are not only technically sound but also deliver tangible business value. We will explore methodologies beyond standard Agile, delving into frameworks like CRISP-DM as discussed by experts in the field. The curriculum, designed by BIG BEN Training Center, is inspired by foundational concepts in data project management, similar to those outlined in works like "Agile Data Science 2.0" by Russell Jurney, focusing on iterative value delivery and robust experimentation. This training moves beyond theory, equipping managers with the practical skills needed for scoping, planning, executing, and deploying AI solutions effectively. It emphasizes a holistic approach, integrating technical project management with crucial elements of data governance, ethical considerations, and long-term value realization, making it an essential program for leaders in the modern data-centric organization.

Target Audience / This training course is suitable for:

- Project Managers and Program Managers.
- Data Scientists and Machine Learning Engineers aspiring to leadership roles.
- IT Managers and Directors.
- Product Owners and Product Managers.
- Business Analysts working on data-intensive projects.
- Technology Consultants and Solutions Architects.
- Heads of Analytics and Business Intelligence.
- Executives and decision-makers overseeing AI and data initiatives.

Target Sectors and Industries:

- Technology and Software Development.
- Banking, Financial Services, and Insurance (BFSI).
- Healthcare and Pharmaceuticals.
- Retail and E-commerce.
- Telecommunications.
- Manufacturing and Supply Chain.
- Government agencies and public sector organizations.
- Energy and Utilities.

Target Organizations Departments:

- Information Technology (IT) and Engineering.
- Research and Development (R&D).
- Product Management and Development.
- Business Intelligence and Data Analytics.
- Operations and Logistics.
- Strategy and Corporate Planning.
- Digital Transformation Offices.
- Marketing and Customer Insights.

Course Offerings:

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

- Master the key differences between traditional and AI project management lifecycles.
- Apply frameworks like CRISP-DM and Agile for data science to manage projects effectively.
- Develop comprehensive project plans, including scope, resource, and risk management for AI initiatives.
- Define clear business objectives and success metrics for data science projects.
- Facilitate effective communication between technical teams and non-technical stakeholders.
- Implement robust data governance and quality management practices within projects.
- Navigate the MLOps lifecycle for seamless model deployment and monitoring.
- Evaluate the ethical implications and biases in AI models and develop mitigation strategies.
- Calculate and articulate the return on investment (ROI) for AI and data science projects.
- Lead data science teams with confidence, fostering a culture of experimentation and innovation.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, experiential, and directly applicable to real-world challenges. This course moves beyond passive lectures, immersing participants in a dynamic learning environment. We utilize a blend of expert-led instruction, in-depth case study analysis of successful and failed AI projects, and collaborative group workshops. Participants will work in teams on a simulated end-to-end data science project, from initial business problem formulation to creating a deployment plan, allowing them to apply concepts in a practical context. Interactive sessions, peer-to-peer discussions, and problem-solving exercises are central to our approach, ensuring a deep understanding of complex topics like risk mitigation and stakeholder management. Our instructors facilitate a continuous feedback loop, providing personalized guidance and encouraging participants to share their own professional experiences. This hands-on, collaborative method ensures that attendees leave not just with knowledge, but with the confidence and skills to immediately implement strategic AI and data science project management practices within their organizations.

Course Agenda (Course Units):

Unit One Foundations of AI and Data Science Project Management

- Understanding the unique nature of data science projects.
- Contrasting AI project lifecycles with traditional software development.
- Introduction to the Cross-Industry Standard Process for Data Mining (CRISP-DM).
- The role of the project manager in data-driven initiatives.
- Aligning AI projects with strategic business objectives.
- Key terminology and concepts in AI, machine learning, and data science.
- Stakeholder identification and analysis in a data context.

Unit Two Strategic Project Initiation and Planning

- Defining the business problem and formulating a data science question.
- Conducting feasibility studies for AI and data projects.
- Scoping projects and defining clear success metrics (KPIs and OKRs).
- Data acquisition and exploration planning.
- Building the data science project team and defining roles.
- Resource planning and estimation techniques for uncertain projects.
- Developing a comprehensive AI project management plan.

Unit Three Agile Methodologies and Project Execution

- Adapting Agile and Scrum for data science workflows.
- Managing iterative cycles of experimentation and model development.
- Effective backlog management for data science tasks.
- Implementing robust data governance and quality controls.
- Techniques for managing stakeholder expectations and communication.
- Tracking progress and managing project velocity.
- Risk identification, analysis, and mitigation for AI projects.

Unit Four MLOps, Deployment, and Model Management

- Introduction to MLOps (Machine Learning Operations).
- Bridging the gap between model development and production.
- Planning for model deployment and integration.
- Strategies for continuous integration and continuous delivery (CI/CD) for ML.
- Monitoring model performance and detecting drift.
- Managing technical debt in machine learning systems.
- Versioning for data, code, and models.

Unit Five Governance, Ethics, and Measuring Value

- Implementing Responsible AI and ethical frameworks.
- Identifying and mitigating bias in AI models.
- Ensuring compliance with data privacy regulations (e.g., GDPR).
- Techniques for measuring and communicating the ROI of AI projects.
- Scaling data science projects and building a center of excellence.
- Change management for AI adoption within the organization.
- Future trends in AI project management and technology.

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:

How can project managers effectively balance the exploratory, research-oriented nature of data science with the structured demands of project deadlines and budget constraints?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by focusing on the strategic intersection of project management, data science, and business leadership, rather than concentrating solely on technical tools or generic agile practices. We address the fundamental mindset shift required to lead projects where the path to a solution is not predetermined and experimentation is key. Unlike other programs that may offer a superficial overview, we provide a deep dive into hybrid methodologies like Agile-CRISP-DM, offering a pragmatic framework for managing uncertainty. The curriculum is uniquely structured to build a bridge between technical data teams and executive stakeholders, emphasizing the art of translating complex data insights into compelling business cases and measurable ROI. Furthermore, the course places a significant emphasis on the often-overlooked but critical domains of MLOps, ethical AI, and data governance. Participants gain a holistic, end-to-end perspective, from strategic alignment and ethical considerations at the outset to long-term model monitoring and value realization post-deployment, equipping them to lead with foresight and responsibility in the complex landscape of artificial intelligence.