



AI Engineer specializing in Business Automation and AI Systems

17 – 21 January 2027
Kuala Lumpur (Malaysia)



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Ref: 121643_1041302 **Date:** 17 – 21 January 2027 **Location:** Kuala Lumpur (Malaysia) **Fees:** 4900 Euro

Introduction

This AI Engineer specializing in Business Automation and AI Systems course prepares professionals to build and deploy intelligent AI systems that automate complex business processes. It focuses on developing a practical understanding of AI engineering, machine learning workflows, and automation architecture used in modern enterprises. Participants will explore how AI can streamline operations, reduce manual effort, and improve decision-making efficiency. The program covers the integration of AI tools with enterprise systems, including ERP, CRM, and cloud platforms. It emphasizes designing scalable and production-ready AI-driven automation solutions. Learners will be able to design end-to-end AI systems tailored for business transformation.

Targeted Groups

This AI Engineer specializing in Business Automation and AI Systems training targets professionals seeking knowledge and skills:

- Software developers aiming to transition into AI engineering roles.
- Business analysts working on process optimization and automation.
- IT professionals are involved in enterprise system integration.
- Data professionals seeking applied AI in business environments.
- Automation engineers focused on workflow intelligence systems.
- Project managers leading digital transformation initiatives.
- Entrepreneurs building AI-driven business solutions.
- Technical consultants supporting AI adoption in organizations.

Course Objectives

Participants will achieve the following objectives by completing the AI Engineer specializing in Business Automation and AI Systems course:

- Understand AI engineering principles and automation frameworks in business systems.
- Design AI-driven workflows for operational efficiency and scalability.
- Apply machine learning models to real-world business automation tasks.
- Integrate AI solutions with enterprise platforms like ERP and CRM.
- Develop intelligent agents for process automation and decision support.
- Evaluate data pipelines for AI system readiness and optimization.
- Implement cloud-based AI services for scalable deployment.
- Analyze business processes for AI transformation opportunities.

Targeted Competencies

Participants will gain the following competencies during the AI Engineer specializing in Business Automation and AI Systems program:

- AI system design for business automation environments.
- Machine learning implementation for operational workflows.
- Integration of AI tools with enterprise software systems.
- Data preprocessing and pipeline optimization skills.
- Development of intelligent automation agents.
- Deployment of scalable AI solutions in cloud infrastructure.
- Analytical thinking for process improvement and optimization.
- Problem-solving in AI-driven business scenarios.

Studying Scenarios

In this AI Engineer specializing in Business Automation and AI Systems training, participants develop skills through the following scenarios:

- Automating invoice processing using AI-based document recognition systems.
- Designing AI chatbots for customer service automation in enterprises.
- Building predictive models for sales and demand forecasting systems.
- Integrating AI workflows into CRM platforms for lead optimization.
- Developing intelligent HR automation systems for recruitment screening.

Course Content

Unit 1: Foundations of AI Engineering for Business Automation

- Introduction to AI engineer specialization in business automation systems.
- Core concepts of artificial intelligence and machine learning fundamentals.
- Overview of AI automation in modern digital enterprises.
- Understanding business process automation and workflow intelligence.
- Key principles of AI system architecture and design.
- Role of AI in digital transformation strategies.
- Basics of data-driven decision-making in organizations.
- Introduction to intelligent systems and automation layers.
- Understanding supervised and unsupervised learning concepts.
- Overview of enterprise AI adoption models.

Unit 2: Machine Learning for Business Automation

- Understanding machine learning workflows in enterprise environments.
- Data collection methods for business AI systems.
- Feature engineering for structured and unstructured data.
- Training predictive models for automation tasks.
- Model evaluation techniques for business performance.
- Supervised learning applications in business optimization.
- Unsupervised learning for customer and process segmentation.
- Time-series forecasting for operational planning.
- Optimization of ML pipelines for production systems.
- Use cases of AI-driven business intelligence systems.

Unit 3: AI Systems Architecture and Integration

- Designing scalable AI system architecture for enterprises.
- Integration of AI models with ERP and CRM systems.
- Cloud computing platforms for AI deployment.
- API-based integration for automation workflows.
- Microservices architecture in AI systems.
- Data flow design for real-time AI applications.
- Security considerations in AI system integration.
- Handling structured and unstructured business data.
- System monitoring and performance optimization.
- AI orchestration in distributed environments.

Unit 4: Business Process Automation with AI

- Identifying automation opportunities in business processes.
- Designing AI-powered workflow automation systems.
- Robotic process automation RPA combined with AI.
- Intelligent document processing and data extraction.
- Chatbot development for customer engagement automation.
- AI-driven HR and recruitment automation systems.
- Sales and marketing automation using predictive AI.
- Financial process automation and risk detection systems.
- Workflow optimization using AI decision engines.
- Measuring automation impact on business performance.

Unit 5: Advanced AI Deployment and Optimization

- Deploying AI models in cloud environments.
- Scaling AI systems for enterprise-level usage.
- Monitoring AI model performance in production.
- Continuous improvement of AI automation systems.
- MLOps practices for AI lifecycle management.
- Bias detection and model fairness evaluation.
- Optimization techniques for real-time AI systems.
- Cost management in AI infrastructure deployment.
- Advanced analytics for business intelligence enhancement.
- Future trends in AI engineering and automation systems.

Final Insights & Key Takeaways

This course builds a strong foundation in AI engineering for business automation and enterprise transformation. It prepares professionals to design, integrate, and optimize intelligent systems that drive operational efficiency and innovation.