Strategic RPA and AI Integration for Modern Enterprises Training Course



27 - 31 Dec 2026

Manama

4400 € (Per Person)

Ref: #AI9156_245823

Course Introduction / Overview:

This course provides a comprehensive exploration of the convergence between Robotic Process Automation (RPA) and Artificial Intelligence (AI), a synergy that is redefining the landscape of modern business operations. Moving beyond traditional task automation, this program delves into the realm of intelligent automation, where processes become adaptive, cognitive, and capable of handling complex, unstructured data. As highlighted by academic author Leslie P. Willcocks in works like "Becoming Strategic with Robotic Process Automation", the true value is unlocked when RPA is augmented with AI capabilities like machine learning, natural language processing, and computer vision. This training course is meticulously designed to equip participants with the strategic and technical knowledge to design, implement, and manage sophisticated intelligent automation solutions. At BIG BEN Training Center, we focus on building a deep understanding of how to leverage these technologies to drive significant business outcomes, enhance decision-making, and foster a culture of continuous innovation. Participants will learn to build a robust governance framework, measure the true return on investment, and navigate the ethical considerations inherent in deploying advanced AI, ensuring they are prepared to lead digital transformation initiatives within their organizations and build the future of work.

Target Audience / This training course is suitable for:

- RPA Developers and Architects seeking to integrate AI capabilities.
- Business Analysts and Process Improvement Professionals.
- IT Managers and Digital Transformation Leaders.
- AI and Machine Learning Specialists interested in automation applications.
- Operations Managers and Department Heads.
- Data Scientists and Analysts.
- Solution Architects and Enterprise Architects.
- Compliance and Governance Officers.

Target Sectors and Industries:

- Banking, Financial Services, and Insurance.
- Healthcare and Life Sciences.
- Manufacturing and Supply Chain Logistics.
- Telecommunications and Media.
- Retail and Consumer Packaged Goods.
- Energy and Utilities.
- Government Agencies and Public Sector Organizations.

Target Organizations Departments:

- Information Technology (IT) and Digital Strategy.
- Finance and Accounting.
- Operations and Production.
- Human Resources (HR) and Talent Acquisition.
- Customer Service and Support Centers.
- Supply Chain and Procurement.
- Audit, Risk Management, and Compliance.

Course Offerings:

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

- Design scalable intelligent automation solutions that combine RPA and AI.
- Integrate machine learning models into RPA workflows for predictive decision-making.
- Apply Natural Language Processing (NLP) for automating communication-based tasks.
- Utilize AI-powered Optical Character Recognition (OCR) for intelligent document processing.
- Develop a comprehensive governance and ethics framework for AI-driven automation.
- Architect a resilient and scalable hyperautomation platform.
- Measure and articulate the business value and ROI of intelligent automation projects.
- Lead the development of an Intelligent Automation Center of Excellence (CoE).
- Manage the full lifecycle of an AI-enhanced RPA implementation.
- Anticipate and plan for future trends in cognitive automation and the future of work.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be immersive, practical, and highly interactive, ensuring participants can translate theoretical knowledge into real-world capabilities. Our approach moves beyond traditional lectures to foster a dynamic learning environment. The course is built upon a foundation of expert-led instruction, where complex concepts of RPA and AI integration are broken down into understandable and actionable modules. This is heavily supplemented by in-depth case study analysis of successful and challenging intelligent automation projects from various industries. Participants will engage in collaborative group workshops and team-based problem-solving exercises, allowing them to tackle realistic business challenges and design innovative automation solutions. Interactive sessions, facilitated discussions, and peer-to-peer feedback are integral to the learning process, encouraging the exchange of ideas and diverse perspectives. A significant emphasis is placed on strategic thinking, enabling participants not just to build bots, but to architect comprehensive automation strategies that align with organizational goals. This hands-on, strategic approach ensures a deep and lasting understanding of the material.

Course Agenda (Course Units):

Unit One: Foundations of Intelligent Automation

- Introduction to Robotic Process Automation (RPA) and its limitations.
- Understanding the core concepts of Artificial Intelligence (AI) and Machine Learning (ML).
- The synergy between RPA and AI, defining Intelligent Automation (IA).
- Exploring the business case for integrating AI with RPA.
- Identifying high-impact processes for intelligent automation.
- Overview of the intelligent automation technology landscape.
- Differentiating between attended, unattended, and cognitive automation.

Unit Two: Integrating Core AI Technologies with RPA

- Deep dive into Machine Learning models for automation.
- Implementing Natural Language Processing (NLP) for text analysis and generation.
- Leveraging Natural Language Understanding (NLU) for chatbots and virtual assistants.
- Applying Computer Vision and advanced Optical Character Recognition (OCR).
- Understanding unstructured vs. structured data processing techniques.
- Practical patterns for integrating AI services with RPA platforms.
- Introduction to AI-powered process and task mining.

Unit Three: Designing and Building AI-Powered Solutions

- The intelligent automation solution design lifecycle.
- Architecting scalable and resilient AI-enhanced bots.
- Techniques for handling exceptions and variations using AI.
- Building bots with decision-making capabilities.
- Managing data pipelines for training and deploying ML models in RPA.
- Testing and validation strategies for cognitive bots.
- Best practices for creating a reusable AI component library.

Unit Four: Scaling Intelligent Automation and Hyperautomation

- Developing a strategic roadmap for enterprise-wide intelligent automation.
- Establishing an Intelligent Automation Center of Excellence (CoE).
- Principles of hyperautomation and the interconnected technology ecosystem.
- Integrating process mining and analytics for continuous improvement.
- Managing the human-in-the-loop and human-over-the-loop processes.
- Change management strategies for workforce and cultural transformation.
- Measuring the total business impact and ROI of scaled automation.

Unit Five: Governance, Ethics, and the Future of Automation

- Creating a robust governance framework for AI in automation.
- Addressing security and compliance challenges in intelligent automation.
- Exploring the ethical implications of AI-driven decision-making.
- Strategies for mitigating bias in automated processes.
- The role of explainable AI (XAI) in building trust.
- Future trends, including generative AI and autonomous agents.
- Preparing the organization for the future of work and human-bot collaboration.

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 intelligent automation becomes more pervasive, what is the single most critical ethical consideration organizations must address to ensure a responsible and human-centric deployment?

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

This course distinguishes itself by adopting a strategic, business-first perspective on intelligent automation, moving beyond the purely technical aspects of bot development. While many programs focus on the "how" of coding a specific tool, our curriculum is architected around the "why" and "what," empowering participants to become leaders who can drive digital transformation. We emphasize the creation of a robust governance and ethics framework, a critical component often overlooked but essential for sustainable and responsible scaling. The content is deeply rooted in academic principles and real-world case studies, focusing on building resilient, scalable hyperautomation ecosystems rather than isolated automated tasks. Participants will learn not just to integrate AI models, but to understand their business implications, manage their lifecycle, and measure their true impact on organizational performance. This program is designed to cultivate strategic thinkers who can build and lead an Intelligent Automation Center of Excellence, manage organizational change, and prepare their enterprises for the next wave of cognitive technologies, ensuring a holistic and future-proof skill set.