ROBOTIC PROCESS AUTOMATION AND INTELLIGENT WORKFLOW MANAGEMENT COURSE

Introduction

This programme develops the knowledge and practical skills required to automate repetitive, rule-based digital tasks using robotic process automation (RPA) and intelligent workflow technologies. It examines software bots, process discovery, automation design, desktop and web automation, exception handling, monitoring and automation governance. Participants learn how software robots can interact with applications, transfer information, process documents, reconcile records and execute repetitive workflows. The programme also introduces intelligent automation, including the use of optical character recognition, document processing, AI-assisted classification and human review for tasks that require interpretation. Practical applications include invoice processing, data reconciliation, customer onboarding, records entry, report preparation and administrative workflow management. The course emphasizes selecting appropriate automation opportunities, measuring benefits and designing reliable solutions that maintain security, accountability and operational continuity.

Course Objectives

- Explain RPA concepts, architectures and business applications.
- Identify and assess suitable processes for robotic automation.
- Design and build basic software bot workflows using appropriate tools.
- Apply selectors, variables, conditions and exception-handling techniques.
- Explain how document processing and AI can extend conventional automation.
- Test, monitor and maintain automated workflows.
- Evaluate automation benefits, risks, governance and return on investment.

Course Modules

> Module 1: Robotic Process Automation Fundamentals
- RPA concepts, evolution and organizational applications.
- Attended, unattended and hybrid automation models.
- Software bots, orchestration platforms and execution environments.
- RPA benefits, limitations and comparison with traditional automation.

> Module 2: Process Discovery and Automation Assessment
- Identifying repetitive, rule-based and high-volume activities.
- Process mapping, task observation and workflow documentation.
- Assessing process stability, complexity and automation suitability.
- Prioritizing opportunities using value, effort, risk and expected benefits.

> Module 3: RPA Architecture and Development Environments
- RPA platform components and development environments.
- Bot design, workflow sequences and reusable components.
- Application access, selectors and interaction methods.
- Bot execution, scheduling and orchestration fundamentals.

> Module 4: Desktop and Web Application Automation
- Automating forms, menus, buttons and user interface interactions.
- Extracting and entering data in business applications.
- Browser automation, navigation and web element identification.
- Automating spreadsheets, files and routine office tasks.

> Module 5: Workflow Logic and Data Processing
- Variables, data types and data structures in automation.
- Conditions, loops and decision-based workflow execution.
- Processing spreadsheets, structured files and text records.
- Data validation, transformation and reconciliation.

> Module 6: Exception Handling and Automation Reliability
- Identifying expected and unexpected workflow exceptions.
- Error handling, retries, timeouts and recovery procedures.
- Logging, screenshots and execution evidence.
- Designing resilient workflows and reducing bot failures.

> Module 7: Intelligent Automation and Document Processing
- Differences between conventional RPA and intelligent automation.

- Optical character recognition and document data extraction.
- AI-assisted classification, text processing and information extraction.
- Confidence thresholds, human review and exception resolution.

> Module 8: RPA Testing, Monitoring and Performance Management
- Testing bot logic, application interactions and output accuracy.
- Monitoring bot runs, queues, failures and execution history.
- Measuring throughput, processing time and error rates.
- Troubleshooting, bot maintenance and performance optimization.

> Module 9: Automation Security, Governance and Risk
- Access control, credentials and secure bot identities.
- Data privacy, confidentiality and information protection.
- Change management, audit trails and automation documentation.
- Bot ownership, operational controls and business continuity

> Module 10: RPA Implementation and Business Case Project
- Selecting and documenting a business process for automation.
- Designing a bot workflow with defined inputs, actions and outputs.
- Testing the solution and documenting exceptions.
- Evaluating productivity gains, costs, risks and implementation priorities.

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