Training Course on Artificial Intelligence and Automation

Professional Development Training Course Outline

Category	Artificial Intelligence And Block Chain	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today's rapidly evolving digital landscape, the convergence of **Artificial Intelligence (AI)** and **Automation** is no longer a futuristic concept but a present-day necessity for organizations seeking enhanced efficiency, innovation, and competitive advantage. This comprehensive training course is meticulously designed to equip individuals and teams with the fundamental knowledge and practical skills required to understand, implement, and leverage the transformative power of these cutting-edge technologies. By mastering the core principles of **machine learning**, **robotic process automation (RPA)**, and intelligent automation strategies, participants will gain invaluable insights into how to streamline workflows, optimize decision-making processes, and unlock new avenues for growth. This course emphasizes a hands-on approach, blending theoretical understanding with real-world case studies and practical exercises to ensure participants can confidently apply their learning in diverse organizational settings.

This program delves into the intricacies of building intelligent systems and automating repetitive tasks, exploring the ethical considerations and strategic implications of adopting **AI-driven solutions**. Participants will learn to identify opportunities for automation within their organizations, evaluate different AI and automation tools, and develop effective implementation roadmaps. The curriculum also covers crucial aspects such as data management, algorithm selection, and performance monitoring, ensuring a holistic understanding of the AI and automation lifecycle. By focusing on practical application and the development of in-demand skills, this training empowers individuals to become catalysts for innovation and efficiency within their respective fields, driving tangible results and fostering a culture of continuous improvement through intelligent technologies.

Programme Curriculum

Training Course on Artificial Intelligence and Automation

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Course Duration

10 days

Course Objectives

1. Understand the **fundamentals of Artificial Intelligence (AI)** and its various subfields.
2. Grasp the core concepts and benefits of **Robotic Process Automation (RPA)**.
3. Identify and evaluate opportunities for **intelligent automation** within organizations.
4. Learn to design and implement basic **machine learning algorithms** for practical applications.
5. Explore different types of **AI and automation tools** and platforms.
6. Develop strategies for effective **data management** in AI and automation projects.
7. Understand the principles of **natural language processing (NLP)** and its applications.
8. Gain insights into **computer vision** techniques and their role in automation.
9. Learn to build and deploy simple **automation workflows** using RPA tools.
10. Analyze the **ethical implications of AI** and ensure responsible implementation.
11. Understand the key steps involved in the **AI and automation project lifecycle**.
12. Learn to measure the **performance and ROI of AI and automation initiatives**.
13. Develop a roadmap for **adopting and scaling AI and automation** within an organization.

Organizational Benefits

- Increased operational efficiency and productivity through automation of repetitive tasks.
- Reduced human error and improved accuracy in business processes.
- Enhanced decision-making capabilities through AI-powered data analysis and insights.
- Improved customer experience through personalized interactions and faster service.
- Cost reduction through optimized resource allocation and streamlined workflows.

- Faster time-to-market for new products and services.
- Increased employee satisfaction by freeing up human capital for more strategic and creative work.
- Enhanced competitive advantage through innovation and the adoption of cutting-edge technologies.

Target Audience

1. IT Professionals seeking to expand their skill set in AI and automation.
2. Business Analysts looking to identify automation opportunities.
3. Process Improvement Managers aiming to optimize workflows.
4. Managers and Leaders seeking to understand the strategic impact of AI.
5. Data Scientists interested in applying AI techniques to automation.
6. Software Developers wanting to build intelligent applications.
7. Operations Managers focused on improving efficiency and reducing costs.
8. Individuals with a keen interest in emerging technologies and their practical applications.

Course Outline

Module 1: Introduction to Artificial Intelligence

- Defining AI: History, evolution, and key concepts.
- Branches of AI: Machine Learning, Deep Learning, NLP, Computer Vision, Robotics.
- Types of AI: Narrow/Weak AI, General/Strong AI, Superintelligence.
- The impact of AI across industries and future trends.
- Ethical considerations and societal implications of AI.

Module 2: Fundamentals of Robotic Process Automation (RPA)

- Understanding RPA: Definition, benefits, and limitations.
- RPA vs. Traditional Automation and AI.
- Key components of an RPA system: Bots, Orchestrators, Studios.
- Identifying suitable processes for RPA implementation.
- Overview of popular RPA tools and platforms.

Module 3: Intelligent Automation: The Convergence of AI and RPA

- Defining Intelligent Automation (IA).
- How AI enhances RPA capabilities: Cognitive automation.
- Use cases of IA: Document processing, customer service, fraud detection.
- Building an IA strategy for organizational transformation.
- Evaluating the ROI of Intelligent Automation initiatives.

Module 4: Machine Learning Essentials

- Introduction to Machine Learning: Supervised, Unsupervised, Reinforcement Learning.
- Key Machine Learning algorithms: Linear Regression, Logistic Regression, Decision Trees.
- Data preprocessing and feature engineering techniques.
- Model training, validation, and evaluation metrics.
- Practical applications of Machine Learning in automation.

Module 5: Natural Language Processing (NLP)

- Understanding the basics of Natural Language Processing.

- Text preprocessing techniques: Tokenization, stemming, lemmatization.
- Sentiment analysis and text classification.
- Applications of NLP in chatbots, virtual assistants, and text analytics.
- Integrating NLP with automation workflows.

Module 6: Computer Vision Fundamentals

- Introduction to Computer Vision and its applications.
- Image processing techniques: Object detection, image recognition.
- Using computer vision for quality control and inspection.
- Integrating computer vision with robotic systems.
- Ethical considerations in computer vision applications.

Module 7: Data Management for AI and Automation

- The importance of data quality and governance in AI.
- Data collection, storage, and preparation strategies.
- Data security and privacy considerations.
- Using data analytics to drive automation decisions.
- Building a data pipeline for AI and automation projects.

Module 8: AI and Automation Tools and Platforms

- Overview of leading RPA software vendors.
- Exploring popular AI platforms and cloud services.
- Comparing different tools based on features and cost.
- Open-source tools and libraries for AI and automation.
- Selecting the right tools for specific organizational needs.

Module 9: Designing and Implementing Automation Workflows

- Identifying processes suitable for automation.
- Process mapping and analysis for automation.
- Designing efficient and scalable automation workflows.
- Best practices for RPA development and testing.
- Deployment and maintenance of automation solutions.

Module 10: Ethical Considerations in AI and Automation

- Bias in AI algorithms and its impact.
- Ensuring fairness and transparency in AI systems.
- Data privacy and security in automated processes.
- The impact of automation on the workforce and job displacement.
- Developing ethical guidelines for AI and automation implementation.

Module 11: AI and Automation Project Lifecycle

- Planning and defining AI and automation projects.
- Requirements gathering and feasibility analysis.
- Development and testing methodologies.
- Deployment and change management.
- Monitoring, maintenance, and continuous improvement.

Module 12: Measuring Performance and ROI of AI and Automation

- Identifying key performance indicators (KPIs) for automation.
- Calculating the return on investment (ROI) of AI initiatives.
- Tracking the impact of automation on business outcomes.
- Using data to demonstrate the value of AI and automation.
- Communicating the success of AI and automation projects to stakeholders.

Module 13: Adopting and Scaling AI and Automation

- Developing an organizational strategy for AI and automation adoption.
- Building a Center of Excellence (CoE) for automation.
- Fostering a culture of innovation and continuous learning.
- Addressing challenges and overcoming resistance to change.
- Scaling automation initiatives across the enterprise.

Module 14: Future Trends in AI and Automation

- Emerging AI technologies and their potential impact.
- The evolution of RPA towards hyperautomation.
- The role of AI in edge computing and IoT.
- The impact of AI on the future of work.
- Preparing for the next wave of AI and automation advancements.

Module 15: Case Studies and Real-World Applications

- In-depth analysis of successful AI and automation implementations across various industries.
- Lessons learned from real-world case studies.
- Identifying best practices and common pitfalls.
- Exploring innovative applications of AI and automation.
- Inspiring participants to identify opportunities within their own organizations.

Training Methodology

This course employs a blended learning approach that combines:

- **Interactive Lectures:** Engaging sessions covering theoretical concepts and real-world examples.
- **Hands-on Labs:** Practical exercises and coding assignments to reinforce learning.
- **Case Studies:** Analysis of successful AI and automation implementations across industries.
- **Group Discussions:** Collaborative sessions to foster peer learning and knowledge sharing.
- **Project-Based Learning:** Participants will work on a mini-project to apply their skills.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now