AI Systems Architecture and Governance Training Course

Professional Development Training Course Outline

Category	Artificial Intelligence And Block Chain	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

The rapid advancement of **AI technology** has created an unprecedented need for robust architectural frameworks and comprehensive governance. Organizations are no longer just asking "can we deploy this AI?" but "should we, and how do we ensure it is **ethical, fair, and secure**?" AI Systems Architecture and Governance Training Course is designed to empower technical leaders and decision-makers with the knowledge and tools to build and manage AI systems that are not only high-performing but also **responsible** and **trustworthy**. By focusing on the crucial intersection of **AI systems architecture** and **governance frameworks**, we'll equip you to navigate the complex landscape of **AI ethics**, **compliance**, and **risk management**.

In this new era of **generative AI** and **large language models (LLMs)**, the challenges of **data privacy**, **algorithmic bias**, and **human-in-the-loop oversight** have become more critical than ever. This training will move beyond theoretical concepts to provide **practical skills** in designing **scalable, secure, and transparent** AI solutions. You'll learn how to implement **AI governance policies**, conduct **AI audits**, and ensure regulatory adherence, transforming AI from a potential risk into a strategic asset. Our goal is to cultivate a new generation of leaders who can build a foundation of trust and accountability for the future of AI.

Programme Curriculum

AI Systems Architecture and Governance Training Course

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Course Duration

5 days

Course Objectives

1. Understand and apply core principles of Responsible AI and AI ethics.
2. Design and architect scalable AI systems and data pipelines.
3. Implement AI governance frameworks aligned with business strategy.
4. Navigate the global AI regulatory landscape and ensure compliance.
5. Develop strategies for mitigating algorithmic bias and ensuring fairness.
6. Master AI risk assessment and AI security protocols.
7. Integrate human-in-the-loop processes for effective oversight.
8. Build and manage a trustworthy AI ecosystem.
9. Apply Explainable AI (XAI) principles to enhance transparency.
10. Formulate policies for data privacy and AI data protection.
11. Lead and manage a cross-functional AI governance committee.
12. Create a roadmap for sustainable AI adoption and innovation.
13. Leverage AI auditing and monitoring tools for continuous improvement.

Organizational Benefits

- Protect the organization from legal penalties and reputational damage by proactively addressing **regulatory compliance** (e.g., EU AI Act, GDPR) and **AI security** vulnerabilities.
- Build a culture of **trustworthy AI** among employees, customers, and partners, strengthening brand reputation and fostering ethical innovation.
- Establish a clear, structured **AI governance** framework that enables teams to deploy new AI systems faster and more safely, without compromising on ethical standards.
- Implement best practices for **AI systems architecture** that lead to more efficient, scalable, and reliable AI models, reducing costs and improving performance.
- Demonstrate a commitment to **Responsible AI**, making the organization an attractive workplace for top-tier **AI architects**, **data scientists**, and **AI ethics** professionals.

Target Audience

1. AI & Machine Learning Engineers
2. Data Scientists & Analysts

3. Solutions & Enterprise Architects
4. IT & Technology Managers
5. Risk & Compliance Officers
6. Chief Technology Officers (CTOs) & CIOs
7. Legal & Policy Advisors
8. Project Managers leading AI initiatives

Course Outline

Module 1: Foundations of AI Governance & Responsible AI

- Understanding the AI Landscape AI.
- Principles of Responsible AI
- The Business Case for Governance
- AI Ethics vs. AI Governance.
- **Case Study:** The rise of deepfake technology and the ethical and governance challenges of content authenticity.

Module 2: Designing a Secure & Scalable AI Architecture

- Architectural Patterns for AI Systems.
- Data Pipeline Architecture.
- AI Security & Threat Modeling.
- Hardware and Infrastructure.
- **Case Study:** Building a fraud detection system with a scalable, secure, and auditable architecture.

Module 3: AI Regulatory Landscape & Compliance

- Navigating Global Regulations.
- Data Privacy in AI.
- Compliance by Design.
- Legal & Ethical Risk Assessment.
- **Case Study:** Analyzing a financial institution's AI lending model to ensure compliance with fair lending laws.

Module 4: Mitigating Bias & Ensuring Fairness

- Sources of Algorithmic Bias.
- Bias Detection Techniques.
- Fairness in AI.
- Bias Mitigation Strategies
- **Case Study:** A recruiting company's AI-powered hiring tool that was found to be biased against female applicants, and the steps taken to fix it.

Module 5: Implementing AI Governance Frameworks

- Establishing an AI Governance Committee.
- Developing AI Governance Policies
- Auditing & Accountability.
- Transparency & Explainability (XAI).
- **Case Study:** Creating a governance playbook for a healthcare company using AI to diagnose diseases.

Module 6: Human-in-the-Loop & Oversight

- Defining Human Oversight
- Human-in-the-Loop Architectures.
- Training & Change Management.
- The Future of Work.
- **Case Study:** A self-driving vehicle company's process for handling edge cases that require human intervention.

Module 7: The Future of AI & Emerging Challenges

- Governance of Generative AI.
- Edge AI & Federated Learning.
- The Role of AI Agents.
- AI for Good.
- **Case Study:** The governance challenges of deploying a large language model (LLM) for customer service.

Module 8: Capstone Project & Roadmap Development

- Applied AI Governance.
- Risk Assessment Workshop
- Roadmap for Implementation.
- Peer Review & Feedback.
- **Case Study:** Developing a complete governance roadmap for a company looking to adopt **AI at scale**.

Training Methodology

This course employs a **blended learning methodology** that combines theory, practical application, and collaborative discussion to ensure a comprehensive and engaging experience.

- Interactive Lectures.
- Hands-on Workshops.
- Real-World Case Studies
- Group Discussions & Peer Learning.
- Capstone Project.

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	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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

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