

AI+ Construction Practitioner™ Training

Course Duration: 8 Hours

TOC

Module 1: Artificial Intelligence – Foundations for Construction Professionals

- 1.1 Artificial Intelligence (AI)
- 1.2 Core AI Concepts
- 1.3 AI in Daily Life & Across Industries
- 1.4 Ethical & Responsible AI in Construction
- 1.5 Case Study
- 1.6 Hands – on Simulation Activity

Module 2: Foundations of AI in Construction

- 2.1 The Rise of AI in Construction
- 2.2 The AI Ecosystem in Construction
- 2.3 Challenges in AI Adoption
- 2.4 Case Study
- 2.5 Hands – on Simulation Activity

Module 3: Generative Design & AI-Driven Planning

- 3.1 Generative Design Concepts
- 3.2 AI for Sustainable Construction
- 3.3 Scheduling & Cost Estimation with AI
- 3.4 Case Study: EcoConstruct Ltd.
- 3.5 Hands – on Simulation Activity

Module 4: Predictive Maintenance & Smart Asset Management

- 4.1 Cost and Performance Optimization: The Economic Context Pipeline
- 4.2 Data Analytics for Asset Management
- 4.3 Computer Vision for Site Safety
- 4.4 Case Study: Build Sure Projects

4.5 Hands – on Simulation Activity

Module 5: AI Agents for Construction Management

5.1 Introduction to AI Agents

5.2 Site Management Agents

5.3 Safety & Compliance Agents

5.4 Case Study: Metro Link Builders

5.5 Hands – on Simulation Activity

Module 6: AI in Project Analytics & Risk Forecasting

6.1 AI for Cost and Delay Prediction

6.2 Risk Management using AI

6.3 Data Visualization and Reporting

6.4 Case Study: Skyline Infra

6.5 Hands – on Simulation Activity

Module 7: Responsible & Ethical AI in Construction

7.1 Principles of Responsible AI

7.2 Compliance and Data Protection

7.3 Human Oversight and Bias Prevention

7.4 Case Study: Safe Build Pvt. Ltd.

7.5 Interactive Activity

7.6 Hands – on Simulation Activity

Module 8: Capstone Project — AI-Enabled Smart Construction

8.1 Project Definition

8.2 Solution Development

8.3 Presentation and Evaluation

8.4 Hands-on Simulation Activity