

AI+ Construction Practitioner™

Duration: 1 Day

Course Overview

The AI+ Construction Practitioner™ certification is designed to equip professionals with the knowledge and skills to integrate artificial intelligence into construction processes. This certification focuses on the practical application of AI in construction management, project planning, and construction technology. It covers AI tools, automation, data analysis, and machine learning techniques tailored to enhance efficiency, reduce costs, and improve decision-making within the construction industry. Earning this certification demonstrates a commitment to leveraging AI innovations, positioning individuals as leaders in the evolving construction sector, and preparing them to drive transformation in construction operations.

Course Prerequisites

- **Basic Construction Knowledge:** Understanding of construction processes and terminology.
- **Familiarity with AI Concepts:** Basic knowledge of AI and machine learning principles.
- **Data Analysis Skills:** Ability to interpret and manipulate construction data.
- **Tech-Savvy:** Comfortable with using construction software and tools.
- **Problem-Solving Mindset:** Critical thinking for real-world construction challenges.

Course Agenda

Module 1: Foundations of AI & Microsoft 365 Copilot in HR

- Artificial Intelligence – Foundations for Construction Professionals
- Core AI Concepts
- AI in Daily Life & Across Industries
- Ethical & Responsible AI in Construction
- Case Study
- Hands-on Simulation Activity

Module 2: Foundations of AI in Construction

- The Rise of AI in Construction
- The AI Ecosystem in Construction
- Challenges in AI Adoption
- Case Study
- Hands-on Simulation Activity

Module 3: Generative Design & AI-Driven Planning

- Generative Design Concepts
- AI for Sustainable Construction
- Scheduling & Cost Estimation with AI
- Case Study: EcoConstruct Ltd.
- Hands-on Simulation Activity

Module 4: Predictive Maintenance & Smart Asset Management

- Equipment Health Monitoring Using AI
- Data Analytics for Asset Management
- Computer Vision for Site Safety
- Case Study: Build Sure Projects
- Hands-on Simulation Activity

Module 5: AI Agents for Construction Management

- Introduction to AI Agents
- Site Management Agents
- Safety & Compliance Agents
- Case Study: Metro Link Builders
- Hands-on Simulation Activity

Module 6: AI in Project Analytics & Risk Forecasting

- AI for Cost and Delay Prediction
- Risk Management using AI
- Data Visualization and Reporting
- Case Study: Skyline Infra
- Hands-on Simulation Activity

Module 7: Responsible & Ethical AI in Construction

- Principles of Responsible AI
- Compliance and Data Protection
- Human Oversight and Bias Prevention
- Case Study: Safe Build Pvt. Ltd.
- Interactive Activity
- Hands-on Simulation Activity

Module 8: Capstone Project — AI-Enabled Smart Construction

- Project Definition
- Solution Development
- Presentation and Evaluation
- Hands-on Simulation Activity