

## Training Course

# ARTIFICIAL INTELLIGENCE FOR ARCHITECTURE, ENGINEERING AND CONSTRUCTION COMPANIES

This training program is designed to build a practical understanding of Artificial Intelligence (AI) and its applications for Architecture, Engineering, and Construction (AEC) professionals. Over three sessions, participants will gain a solid foundation in AI basics, explore its applications in the AEC industry, and learn through case studies about the tangible benefits of AI, including BIM integration, automating administrative tasks, structural code summarization and AI-powered rendering. The program features a hands-on session designed to help participants align AI strategies with real-world business challenges and objectives, incorporating ethical considerations. In a final roundtable discussion, the scalability and strategic integration of these solutions will be explored. .

## SPEAKER



### Prof. Alper Kanyilmaz

[Alper Kanyilmaz](#) is associate professor in the Department of Architecture, Built Environment and Construction Engineering of Politecnico di Milano in Italy. He applies data-driven approaches, artificial intelligence, and advanced manufacturing techniques to drive a digitalized and sustainable transition in the Architecture, Engineering, and Construction (AEC) sector toward a life-cycle driven

building structures. His recent works include [“How does conceptual design impact the cost and carbon footprint of structures?”](#), [“A genetic algorithm tool for conceptual structural design with cost and embodied carbon optimization”](#), [“How to enable AI for Architecture, Engineering and Construction Companies?”](#). He is an Expert Advisor for the European Commission Technical group “Steel Applications for New Markets” (Mandate 2023-2028), and project monitoring expert for European Commission, B.1 – Future Low Emission Industries. He provides consulting and training services to companies on topics related to his research and experience, supporting them in applying artificial intelligence, advanced manufacturing, and sustainability in their processes.



## COURSE OUTLINE

### Session 1: Introduction to Artificial Intelligence in the AEC Industry (2h30m)

- A straightforward explanation of AI, focusing on fundamental concepts and algorithms.
- Overview of the current AI landscape in different sectors (e.g., project management optimization, predictive maintenance, risk management).
- Case studies and discussions on successful AI implementations in the AEC industry, highlighting tangible benefits and ROI, such as BIM integration, automation of administrative tasks, structural code summarization and AI-powered rendering.

### Session 2: Building an AI Strategy for Your Business (2h30m)

- Detailed guidance on effective data collection, storage, and processing tailored to AI applications in construction.
- Strategies on mapping company-specific pain points such as repetitive tasks and exploring tools like ChatGPT, Gemini, Perplexity to address them.
- Key ethical considerations and governance models for AI deployment.

### Session 3: Workshop: Solving Business Challenges with AI (2h30m)

- Guided exercises to help teams identify specific business challenges and areas where AI can offer solutions.
- Teams develop AI concepts for identified problems using design thinking principles.
- Instructors provide mentorship and technical advice on feasible AI technologies and their integration into daily workflows.
- Teams present their proposed AI solutions, discussing potential impacts, necessary resources, and implementation challenges.
- Discussion with participants on how to integrate the proposed solutions into their companies' strategic roadmap and workflow.

## INFORMATION



Duration: 7h30



PT time: 16h30 – 19h00 (online)



Dates: 26, 27, 28 February 2025



Price: 450€ + IVA 23% (553,5€)

## CONTACTS

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