

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.

SPEAKERS



Alper Kanyilmaz, Course Coordinator

Alper Kanyilmaz is associate professor in the 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?".

In collaboration with our sponsor:



Blending AEC industry expertise with AI and automation, [AecFoundry](https://www.aecfoundry.com/) delivers tailored digital solutions that empower architecture, engineering, and construction firms to overcome complex challenges, enhance productivity, and unlock new levels of efficiency, for more info: <https://www.aecfoundry.com/>



Guido Maciocci, Founder and Director

Guido combines deep AEC and manufacturing expertise with a focus on AI, automation, and user-centric product development. With 20 years in the industry, he drives AecFoundry's mission to deliver innovative and scalable digital solutions that enhance efficiency and collaboration.



Aleksei Kondratenko, Structural & AI Engineer

Aleksei, with a PhD in structural engineering, specializes in AI-driven design automation and geospatial data science. His expertise in LLMs and agentic systems empowers AEC clients with sophisticated, data-driven solutions.

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., design optimization, project management, predictive maintenance, risk management).
- Case studies and discussions on successful AI implementations in the AEC industry, highlighting tangible benefits and ROI, such as generative design, automated document management, rapid reports creation, risk management, 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, Stable Diffusion, Flowise, Perplexity, etc to address them.
- Key ethical considerations and governance models for AI development and 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€)

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