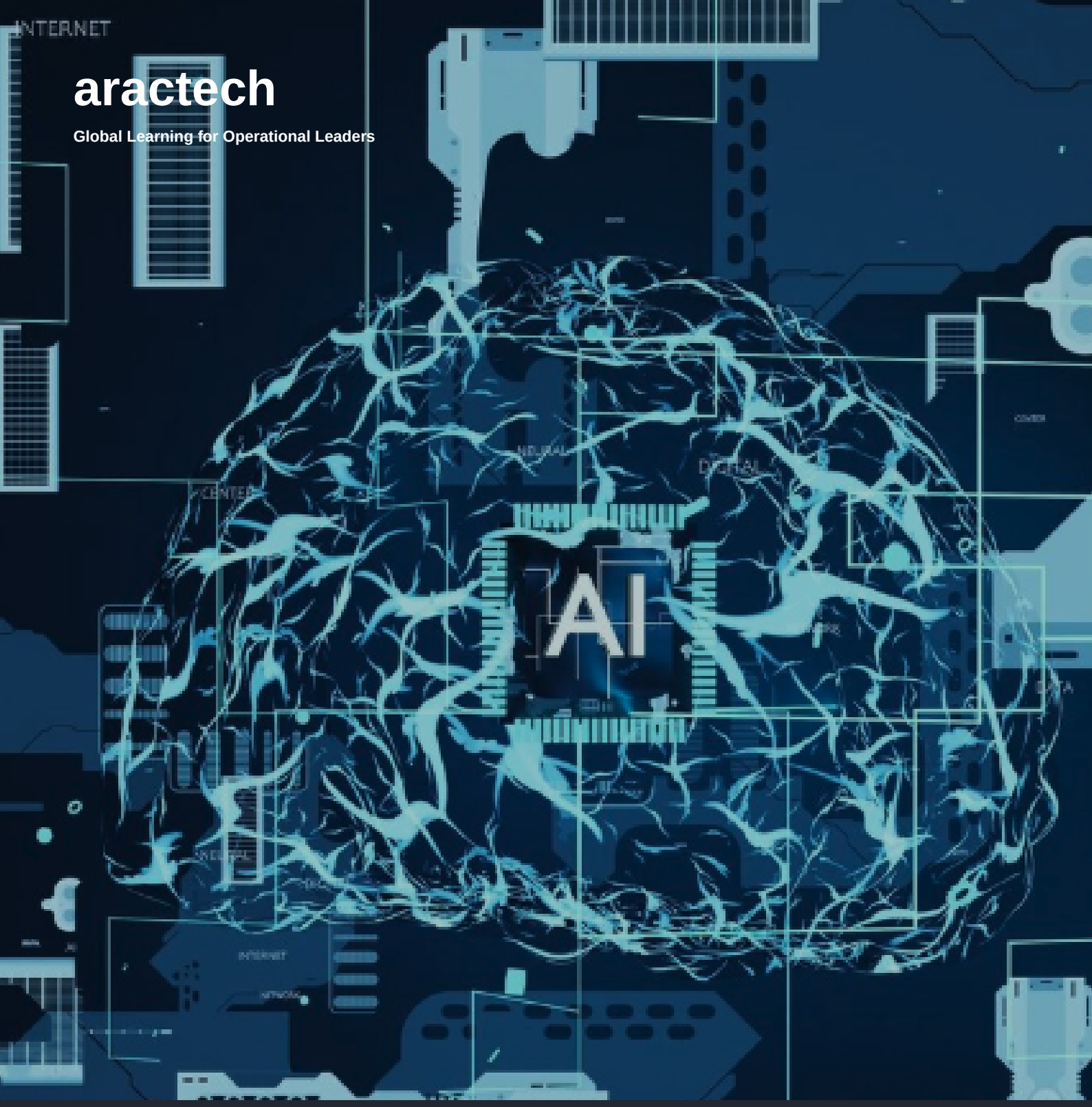

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DIGITAL INNOVATION AND TRANSFORMATION | DIT-003

Fundamentals of Artificial Intelligence (AI)

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Course content

Why Attend

Course Introduction

Artificial Intelligence (AI) is revolutionizing industries, economies, and everyday life. As AI systems grow more capable, understanding the fundamentals of AI is essential for individuals and businesses to stay ahead in a rapidly evolving landscape.

Course Methodology

Course Objectives

Target Audience

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Course outline

Detailed course outline

Day-by-day outline for Fundamentals of Artificial Intelligence (AI).

Day 1 - Introduction to Artificial Intelligence and Its Applications

• Definition and Types of AI: Narrow AI (task-specific), General AI (human-like), and the theoretical concept of Superintelligent AI.

• Historical Evolution of AI: From early symbolic AI to the modern advancements in machine learning and deep learning

• AI in Practice: How AI is transforming industries, from healthcare and finance to transportation and retail

• Core AI Techniques: Machine learning, neural networks, natural language processing (NLP), and AI for robotics and automation

• AI in the Real World: Case studies of successful AI applications, including challenges encountered and lessons learned

Day 2 - Machine Learning Fundamentals

• Overview of Machine Learning: Explanation of supervised, unsupervised, and reinforcement learning

• Key Machine Learning Algorithms: Linear regression, decision trees, random forests, support vector machines, and clustering

• Data's Role in AI: The importance of data in AI and machine learning, covering data collection, preprocessing, and feature engineering

• Feature Engineering: Techniques to create relevant features for machine learning models, helping improve model accuracy

• Hands-on Machine Learning: Participants will apply machine learning algorithms using real-world datasets, building simple models for classification, regression, and clustering

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Day-by-day outline for Fundamentals of Artificial Intelligence (AI).

Day 3 - Neural Networks and Deep Learning

• Neural Networks: Understanding the architecture of neural networks, from input layers to output layers, and how information is passed through hidden layers

• Training Neural Networks: Explanation of backpropagation and how neural networks "learn" by adjusting weights based on errors

• Deep Learning: Introduction to deep learning and why it is considered one of the most transformative AI technologies

• Convolutional Neural Networks (CNNs): How CNNs are designed to process visual data, like images and videos, and their applications in computer vision

• Practical Deep Learning: Participants will use deep learning libraries like TensorFlow or Keras to build a simple neural network or CNN for image classification

Day 4 - Natural Language Processing (NLP) and AI Tools

• Introduction to NLP: How AI systems analyze and understand text and speech data

• Applications of NLP: Sentiment analysis, machine translation, chatbots, and speech recognition

• NLP Techniques: Tokenization, named entity recognition, and part-of-speech tagging, as well as advanced models like Word2Vec and Transformer models (BERT, GPT)

• AI Development Tools: Overview of popular AI development frameworks, such as TensorFlow, PyTorch, and Scikit-learn

• AI as a Service: How companies are using cloud-based AI services (Google AI, Microsoft Azure AI, IBM Watson) to accelerate AI projects

• Practical NLP and Tool Application: Participants will build an NLP-based chatbot or use AI tools to solve a real-world problem (e.g., analyzing social media sentiment)

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Day 5 - AI Ethics, Challenges, and Future Trends

• Ethical Implications of AI: Bias in AI algorithms, privacy issues, and the potential for AI to reinforce societal inequalities

• AI and the Future of Work: Exploring the impact of AI on job automation, future job markets, and the skills required in an AI-driven economy

• AI Governance: Regulatory challenges in AI and the role of governments in establishing policies and standards for AI development

• The Future of AI: An exploration of emerging AI trends, such as AI in quantum computing, AI for healthcare innovation, and AI-driven automation

• Challenges of Scaling AI: Issues with data, computing power, interpretability, and ensuring that AI systems remain safe, fair, and transparent

• Final Project Review and Course Wrap-Up: Participants will revisit the projects they worked on during the course, discuss key takeaways, and explore how to continue learning AI

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Seminar dates

Available seminar dates

Live dates and pricing for Fundamentals of Artificial Intelligence (AI) generated from the course details page.

Date	Location	Format	Fee
15 - 19 June 2026	Barcelona	Classroom	**€2,695**
20 - 24 July 2026	London	Classroom	**€2,940**
3 - 7 August 2026	Rome	Classroom	**€2,975**
7 - 11 September 2026	Munich	Classroom	**€2,415**
12 - 16 October 2026	Amsterdam	Classroom	**€2,975**
9 - 13 November 2026	London	Classroom	**€2,940**
14 - 18 December 2026	Istanbul	Classroom	**€1,995**

Live online option	Online delivery is available at €1,250.