This module introduces the participants to business-oriented modern AI. It gives the basics to start taming the complexity of Data Science and Machine Learning with a special focus on Big Data and Deep Learning.

**Prerequisites**
- General knowledge on computer science.
- Work experience in a professional environment.

**Learning objectives**
After completing this course, participants will be able to:
- Understand how a problem needs to be framed to be tackled by Data Science and AI;
- Be able to answer most basic questions about AI;
- Be acquainted with flagship algorithms and typical business-oriented use-cases;
- Understand the major technology trends driving business-oriented AI;
- Understand the different phases leading to profitable uses of AI (from solid exploratory data analysis practice to state of the art engineering environment).

**Key elements**

**Dates:** October 24 to 27, 2022  
**Duration:** 28 hours, 4 days  
**For whom:** recent graduates, jobseekers and experienced employees  
**Location:** ISAE-SUPAERO, Toulouse  
**Course fees:** €2,300  
**Language:** English  

**Practical information and registration**  
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Course Content

AI Basics:
• History and basic principles of AI and more specifically Machine Learning

Machine Learning:
• Landscape and flagship algorithms on Supervised
• Unsupervised and Reinforcement Learning

Fueling AI:
• Understanding the relationship between problem framing
• Types of data available
• Actual business outcomes and the applicable algorithms

Business intelligence and business models:
• How to deliver insights to end users

Major success stories of Business and AI:
• Targeted publicity and recommendations (such as Netflix’s)
• Google’s Self-driving car
• IBM Watson's Medical diagnosis
• DeepMind’s Alpha Go beating the World champion of Go
• Airbus building the Skywise platform
• How AI can deliver prescription for manufacturing

Teaching methods

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<thead>
<tr>
<th>Teaching methods</th>
<th>Yes</th>
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<tbody>
<tr>
<td>Lectures / tutorial</td>
<td>X</td>
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<tr>
<td>Collaborative learning</td>
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<td>Flipped classroom</td>
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<td>Blended learning (online and face to face)</td>
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<td>Learning by doing</td>
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<td>Project-based</td>
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<td>Simulation</td>
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Assessment

• Case study (100 %)