

# Introduction to AI Technology

**Lecturers: Maria Chiara Debernardi, Andrea Giussani**

## Language

English

## Course description and objectives

In this course we will explore the foundations of the Azure Cognitive Services and other related services to create an artificial intelligence solution. The Cognitive Services suite is a collection of pre-built cloud-based AI components that you can use without having to build your own machine learning models.

At the end of this course, each participant will be able to independently run modern machine learning pipelines in the Azure environment, as well as have a general understanding of the Azure Cognitive Services APIs.

## Audience

The course is targeted at third-year students of the Bachelor's Degree and at students of the Master's Degree Programs at Bocconi University, who want to:

- Learn the primary technological components of an AI strategy
- Understand the methods of Machine Learning
- Articulate how AI technology can solve business problems
- Create image-classification models backed by Artificial Intelligence that "learn" from labeled images you provide
- Build a chatbot with Azure

## Prerequisites

The participant is expected to have a solid knowledge of Probability and Statistics. Having an exposure to Cloud Technology is a plus.

You are not required to have a strong background in programming, though it is highly recommended to have passed the Computer Science course (or equivalent) at Bocconi University, since some Python knowledge is needed during lesson 2.

## Duration

8 hours

## Teaching mode

This course will be only taught in person. Online mode will not be provided.

## Calendar

Lecture	Date	Time	Room
1	Tue 02/05/2023	18.15 - 19.45	InfoAS05
2	Thu 04/05/2023	18.15 - 19.45	InfoAS05
3	Mon 08/05/2023	18.15 - 19.45	InfoAS05
4	Tue 09/05/2023	18.15 - 19.45	InfoAS05

## Syllabus of the course

Lecture	Topics
1	<b>How to build a chatbot with Azure</b> <ul style="list-style-type: none"> <li>- Setting up an Azure Project</li> <li>- Data storage</li> <li>- The QnA Maker Service</li> <li>- Building a Chatbot WebApp with Azure</li> </ul>
2	<b>Azure services for Sentiment Analysis</b> <ul style="list-style-type: none"> <li>- Azure Text Analytics API for Language Detection</li> <li>- Azure Text Analytics API for Sentiment Analysis</li> </ul>
3	<b>How to build an image classifier with Custom Vision</b> <ul style="list-style-type: none"> <li>- Creation of a labelled image dataset</li> <li>- Model training</li> <li>- Evaluation of the model</li> <li>- Test</li> </ul>
4	<b>The Azure Face service</b> <ul style="list-style-type: none"> <li>- Face detection, enriched with attributes</li> <li>- Face recognition: verification vs. identification</li> </ul>

## Software used

Microsoft Azure and Azure Cognitive Services

## Suggested bibliography

Materials will be provided by the teachers and will be available on Blackboard.

## Available seats

This activity is limited to **110** participants. Registrations cannot be carried out once this number has been reached or after closing of the registration period.

Please remember that you can unsubscribe from ITEC courses only before the registration deadline.