UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Intelligent Consumer Technologies

2324-2-F9102Q014

Aims

This course will explore the intersection of artificial intelligence, machine learning, communication technologies and consumer technology. Students will gain a comprehensive understanding of the current state of intelligent consumer technologies, as well as their potential future development and impact, including emerging trends, cutting-edge research, and real-world applications. Topics will include also Internet of Things, signal, image, natural language processing, recommender systems, and more.

Contents

The course consists of a theoretical part and a part of exercises.

The theoretical part aims at exploring artificial intelligence, machine learning, communication technologies and consumer technologies. The part of the exercises aims to deepen IntelliCT ecosystem from a practical point of view: intelligent sensing applications in home environment, in healthcare etc.

The practical part consists in basic and advanced exercises using deep learning frameworks.

Detailed program

Detailed program
• Introduction to Intelligent Consumer Technologies
• Signal, image, and natural language processing in Consumer Technologies
• Personalization, recommender, and adaptive systems
• Smart Environments and Internet of Things

• Future directions and impact of Intelligent Consumer Technologies
• Ethical, legal, and societal implications of Intelligent Consumer Technologies
• Project development and presentation

Prerequisites

Fundamental of AI, Machine and Deep Learning, Fundamental of Communication Technologies, Fundamental of programming.

Teaching form

Lectures and assisted exercises.
Lessons will be held in presence, unless further COVID-19 related restrictions are imposed.

Textbook and teaching resource

• Scientific articles suggested by the teacher.
• Teachers' slides (http://elearning.unimib.it/)
• GitHub of the course:
1. https://github.com/paolonapoletano
2. https://github.com/CeLuigi

Semester

First semester

Assessment method

The exam consists in the design and realization of project assigned by the teacher. The project will be discussed as oral presentation and the teacher can ask questions about theoretical parts of the course program.

Office hours

- Paolo Napoletano, Monday from 14 to 16
- Luigi Celona, Wednesday from 14 to 16

Sustainable Development Goals

INDUSTRY, INNOVATION AND INFRASTRUCTURE