Human-Centered AI (HCAI): an innovative vision for designing intelligent systems

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Course duration: 16 hours (2 CFU)

Course overview

With advances in artificial intelligence new types of tools and systems are created. Some people speak of an AI revolution, in scale similar to the industrial revolution that fundamentally changed tools, technologies, and society. So far, many AI-based applications and services are not focusing on humans and their needs and desires, nor their concerns and worries, i.e. they are not human-centred. Such systems do not adequately support end users because of their poor explainability, lack of control, and lack of reliability and trust. These factors, among others, show that designers and developers have to become aware of the potential ethical and practical issues of this type of system as well as acquire proper knowledge, methodologies and techniques to create effective intelligent systems that may better satisfy their users.

In this respect, a new perspective is emerging that aims at reconsidering the centrality of human beings while reaping the benefits of AI systems to augment rather than replace professional skills: Human-centred AI (HCAI). Its goal is to promote an innovative vision of intelligent systems that are equipped with powerful algorithms but are useful and usable for people, that support them to achieve their goals and that balance system autonomy and control by people.

The course aims to guide the student from the basics of HCAI, exploring principles, challenges and methods to design and evaluate AI-based systems. Then the course will focus on emerging aspects of HCI for AI, for example, the Explainability of AI systems, and general principles for designing Human-AI Interaction. Students will be stimulated to include some topics related to their research activities.

Syllabus

Introduction to Human-AI Interaction

User-Centred Design, Usability and User eXperience

Properties of Interactive Human-Centered AI

Bias & explanations

Proposed Course Calendar

- May 10th, 2022 h. 9.30-11.30
- May 12nd, 2022 h. 9.30-11.30
- May 17th, 2022 h. 9.30-11.30
- May 19th, 2022 h. 9.30-11.30
- May 24th, 2022 h. 9.30-11.30
- May 26th, 2022 h. 9.30-11.30
- May 31st, 2022 h. 9.30-11.30
- June 7th, 2022 h. 9.30-11.30

The calendar may be subject to changes during the course

Microsoft Teams

We will be using MS Teams for online lectures. Please, contact the course professor to obtain the code to access the team.