Smarts Systems

Semester
Fall

In brief

Course langage: French

Presentation

Learning objectives

- Know the fundamentals of intelligent systems

- Know and know how to implement detection, communication and analysis methods

- To approach the technologies and master some data processing techniques

- Carry out a project related to intelligent systems

- Take advantage of the lessons taught in the case of a multidisciplinary project

Description of the programme

Intelligent systems are now part of our daily lives as evidenced by the existence of many applications that rely on the paradigms of artificial intelligence (AI). Intelligent systems are systems that include processes, based on several theories to reproduce some human behavior, to perform a task or a set of tasks. This course aims to provide an overview and introduction to the growing and increasingly strategic field of intelligent systems integration. These systems are becoming ubiquitous and can be present in all domains. This course will provide the main fundamentals and technologies of intelligent systems and their integration. Intelligent systems combine the processing of often massive and/or heterogeneous data (Big Data) with sensing, actuation and communication, and are capable of analyzing complex situations, making autonomous decisions, and being predictive and secure. The miniaturization of these systems makes them very energy efficient or even energy autonomous and can communicate with other systems.The course will also describe advances in academia and industry using examples from various industrial sectors. In industry, integrated intelligent system solutions are fundamental elements of the Industry 5.0 ecosystem.

The underlying techniques enabling such systems will be described alongside the processes used to create these technologies.

Generic central skills and knowledge targeted in the discipline

Master the complexity of systems and the associated problems
Be part of a strategic vision and know how to implement it
Know how to manage programs
Create value through scientific and technical innovation

How knowledge is tested

Continuous control

Bibliography

Course Notes

Teaching team

S. Bourennane

C. Fossati

T. Gaidon

External Speakers

Total des heures		**100h**
CM	Master class	70h
TD	Directed work	16h
TP	Practical work	14h

Useful info

Name responsible for EU

Lead Instructor
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