COURSE SYLLABUS

Expert Systems and Network Architectures for Distributed Wearable Environments

2324-114R006

Title

From Wearable Expert Systems to Wearable Environments: Definitions, Models and Future Challenges

Teacher(s)

Fabio Sartori and Marco Savi

Language

English

Short description

The course will discuss about the definition of Expert Systems over the last four decades in order to understand how this kind of applications have adapted to the technological progress in IoT research field.

Indeed, the recent availability of more and more sophisticated wearable devices at relatively low costs opens new frontiers in the expert systems research field. Applications that can be referred to as «expert systems» run on smart devices and are used by people every day. The possibility to get real-time data through off-the-shelf sensors offers

to the research new challenges to face with, like fault tolerance and networking problems that were not considered few years ago.

With respect to challenges related to networking, the course will introduce some novel technologies that can be used and combined to enhance the availability, resiliency and performance of distributed Wearable Environments, such as Network Slicing and SD-WAN. The course will also give insights on some network simulation and emulation tools that are widely used by the research community to evaluate new algorithms and networking protocols and will introduce, with some hands-on experiments, a well-known network emulation environment, called Mininet, and how it can be used to test and emulate Network Slicing.

CFU / Hours

2 CFU

Teaching period

The course is planned for January/February 2024. Tt is mandatory to register at the following link: https://phd-computer-science.disco.unimib.it/courses-offered/courses-2021-2022/

Lectures will be in presence.

Sustainable Development Goals