Demo 1

Artificial Perception, Natural Driving

Hocine YAKOUBI

Abstact

Join us in this demonstration to explore how an autonomous vehicle perceives and navigates its environment without a human driver.

Equipped with advanced sensors—cameras, radar, and lidar—the vehicle captures a detailed view of its surroundings, detecting pedestrians, lanes, other vehicles, and traffic signs.

Yet sensing is just the beginning. The true intelligence lies in its artificial brain: a sophisticated AI system that processes these inputs in real time to perceive, interpret, and respond with precision.

This is artificial perception—empowering a machine to understand the world with near-human insight.

Watch as the AI transforms raw sensor data into intelligent decisions, enabling the vehicle to drive safely, smoothly, and autonomously with remarkable finesse.

Demo 2

We need to talk about numerical images

Sylvie LELANDAIS

Abstact

We propose a workshop and booth focused on the discovery of digital images. For over ten years, we have developed educational content to explain concepts like image definition, contours, textures, spatial frequencies, shape recognition, style transfer using neural networks and deep learning, image mosaicking, and bijective transformations. This content is presented through posters, games, or computer demonstrations created with MATLAB or Python. Below is a list of themes covered over the years, with some featured during the session:

- What are digital images?
- Color hybrid images
- Frequency mixing to create hybrid images
- When textures camouflage!
- When contours reveal vegetables!
- How can computers automatically recognize characters?
- Digital image: Pixel, did you say pixel?
- Digital image and deep learning: Want to be painted by Picasso or Van Gogh?
- An ocean of images

Join us for a fun and interactive exploration of digital imaging!

Demo 3

CESAAR-AVC and ARROW projects

Frédéric DAVESNE

Abstact

The IRA2 team (Interaction, Virtual & Augmented Reality, Ambient Robotics) at the IBISC laboratory focuses on research in E-Health applications.

We showcase two innovative projects centered on computer-assisted rehabilitation through exergames:

- The CESAAR-AVC project develops an exergame that enables stroke survivors to train their upper limbs in hospitals or at home, independently of a physiotherapist.

- The ARROW project leverages Augmented Reality headsets to offer engaging training for children with cerebral palsy.

Join us to experience these projects firsthand!