UOH cooperation in LatiNetPrax

The University of O'Higgins (UOH) and Hochschule Rhein-Waal (HSRW) have embarked on a collaborative research and teaching initiative as part of the LatiNetPrax project. This partnership aims to foster academic exchange, joint projects, and practice-oriented events between the institutions, focusing on interdisciplinary topics.

LACORO 2024

The Latin American Summer School on Robotics (LACORO 2024) is a five-day event taking place in Rancagua, Chile from December 9-13, 2024. This event aims to make cutting-edge knowledge on Artificial Intelligence for Robotics Applications more accessible in the Southern Hemisphere. LACORO 2024 will feature lectures, tutorials, and mentoring sessions focused on AI, robotics, and human cognition. The EOLab at HSRW is contributing to the event with two hands-on sessions.

Practical Introduction to Artificial Intelligence on Embedded Systems

This workshop provides a hands-on introduction to the topic of artificial intelligence and the possible use cases on embedded hardware. Participants will gain practical and theoretical experience in artificial intelligence and microcontrollers to detect objects with the help of AI vision. At the end of the workshop participants will be able to create an AI to detect objects with a camera connected to AI running on microcontrollers.

Learning Outcomes

1. Understand the basics of AI and the challenges of running them on microcontrollers
2. The process of generating datasets for detecting custom objects incl. train/test data split
3. Training an AI detecting objects {and tuning the hyperparameters}.
4. Deploying an AI onto a microcontroller.

Resources

All the material for the workshop series (3 days for 3 hours) can be found on our GitHub: https://github.com/EOLab-HSRW/esp32s3_object_detection/tree/main

Here a link to the dataset that was gathered during the workshop: Duckie-Tomato-Cherry Dataset

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