

Lab and Assignments

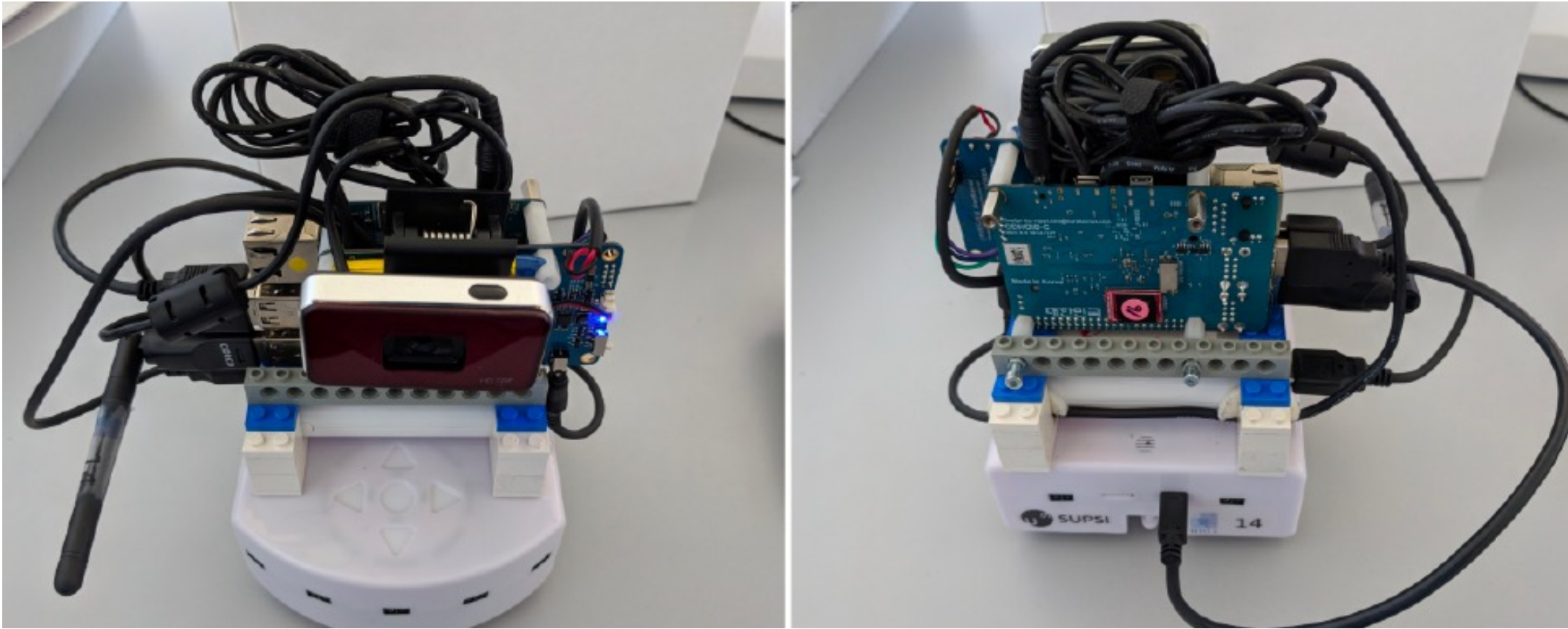
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What we are going to use

ROS2 Humble, Python 3
on Ubuntu 22.04 with VMware



The Mighty Thymio (MyT)



The Robomaster S1 (RMS1)



The Robomaster EP (RMEP)



Overview

- Practical exercises are based on the Robot Operating System 2 (ROS2)

Lectures

- Lab 1–2: Introduction to ROS, basic concepts, environment setup
- Lab 3: Robot simulation in CoppeliaSim

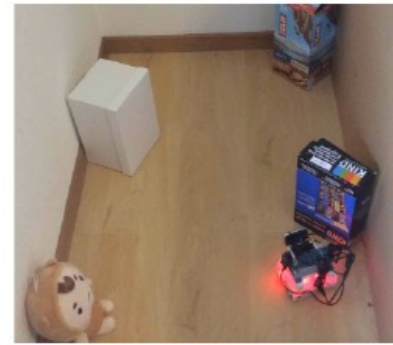
Evaluation

- Homework 1: ROS and robot control basics - Turtlesim 10%
- Homework 2: Robot simulation, sensors, control – MightyThymio in CoppeliaSim 10%
- Homework 3: Final project on a simulated robot (optionally, real robot tests) 30%
- The remaining 50% is the written exam, which does not cover any lab topics!

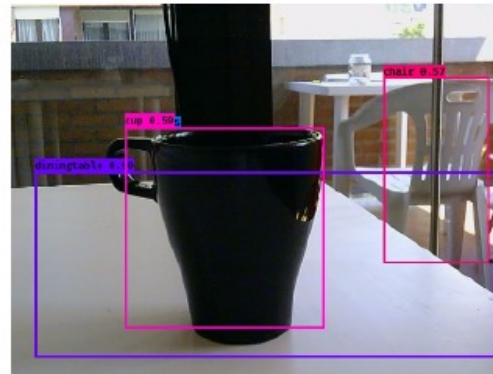
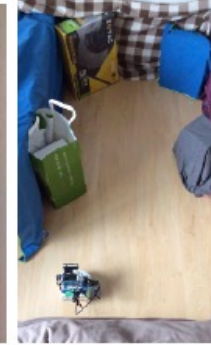
Final project examples



Lane-following



Place recognition



Object recognition