

Romans Sarkisovs

Electrical Engineering Student · Embedded & Hardware

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Electrical engineering student who likes building things that have to work in the real world - calibration rigs, sensor firmware, custom boards. Comfortable down at the register level in C and up at the application layer in Python.

EXPERIENCE

Junior Embedded Engineer, Intern Summer 2024
Weedbot

- Built calibration devices and improved the computer-vision odometer used to track machine movement.
- Wrote C firmware connecting a Raspberry Pi and PIC32 to sensors over low-level protocols.
- Designed PCBs in KiCad, made Python tooling for the team, and modelled parts in SolidWorks.
- Measured distance from camera frames using OpenCV and Lucas-Kanade optical flow.

PROJECTS & RESEARCH

Latvian Voice Assistant Evaluation (research paper) Sep 2023 to Mar 2024
Riga Technical University

- Tested how well Latvian speech-recognition models hold up for home-assistant use.
- Built a minimal Raspberry Pi rig to benchmark each model's accuracy and speed.

Eco-Electric Car (vertically integrated project) Jun 2023 to Oct 2023
Riga Technical University

- Helped develop an eco-electric car for the Shell Eco-marathon competition.
- Simulated the electric motor to find settings that squeezed out more range.

Robotics Club Projects Sep 2023 to Feb 2024
Riga Technical University

- Built a timing device for the robotics club using an ESP32 and time-of-flight sensors.
- Ran machine-learning experiments on an NVIDIA Jetson AGX Xavier.

FIRST Global Robotics Challenge High School
Latvian National Team

- Wrote the robot control program for the REV DUO kit in JavaScript.
- Kept the code in git and wrote the team's technical documentation.

EDUCATION

BSc Electrical Engineering Expected 2028
Eindhoven University of Technology

TECHNICAL SKILLS

LANGUAGES	C, C++, Python, JavaScript, HTML, CSS, CMake
HARDWARE	STM32, PIC32, AVR, ESP32, Raspberry Pi, J-Link, KiCad
TOOLS	Linux, git, gdb, Eclipse, SolidWorks, OpenCV
FOCUS	Embedded development, PCB design, computer vision, 3D modelling