Bc. Dávid Szépvölgyi

Key skills

- Embedded systems
- C, C++, Python
- PCB design
- 3D modeling
- System control
- Matlab

Language:

- English B2

Education

Ing.: Robotics and Cybernetics
from Slovak University of Technology in Bratislava , Faculty Of Electrical engineering and Information technology
Graduation 2025

Bc.: Robotics and Cybernetics
from Slovak University of Technology in Bratislava , Faculty Of Electrical engineering and Information technology
Graduated 2022

Summary

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- Adress: 318, 925 92 Topoľnica

I am an enthusiast passionate about projects related to data collection, Embedded systems, vehicle control, and AI-based visual data processing. I work with embedded systems and am currently studying robotics and AI image processing. I am versatile in programming languages, primarily C and Python, and have experience with UI using React Native for single-user app projects. Some of my projects include implementing the MCUmgr library on STM32, an AI-controlled greenhouse using Raspberry Pi and Firebase, Kobuki robot control, and motor control for a Formula Student vehicle

Career history

Programmer of Embedded systems at KeySoft
February 2024 - Currently
Work with the architecture of Nordic and STM32 firmware structures focuses primarily on the MCU Manager library. This includes implementing the library in custom ways on the STM32G070CBTx, such as managing flash areas, implementing port functions, creating custom firmware signatures with the image tool, and handling image management with a custom bootloader, as well as integrating the library into a FreeRTOS application. Also implementing the MCUmgr protocol with multi-board project using UART bridge between an STM32-based board and an nRF52840-based board.

Electrician and Software development at STUBA Green Team
October 2022 – November 2024
A member of a Slovak Formula Student team, specializing in electrical components, PCB design, 3D part modeling, firmware adjustments, standard CAN line communication, and wiring harnesses, with leadership experience in division management and soft skills. The primary focus is the design of an electronic differential/vector control system using the AMK Racing Kit v2.

Junior Programmer at Bee hive monitoring s. r. o.
February 2022 – May 2023
As a junior team member, my role involved working with sensors, including reading and processing sensor data, as well as adjusting sampling periods and thresholds. I also gained experience with structure of BLE technology, which served as the primary method for data collection.