

# David Govedarevic

## Robotics & Software Engineer

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### PROFILE

17-year-old IT student (4th grade, HTL Wiener Neustadt, 5-year programme with Matura) with a proven track record in competition robotics: **1st place at ECER 2026 (European Championship, Botball/KIPR)** and **3rd place at GCER 2026 (World Championship, top bracket, ~47 teams)**. Comfortable across the full stack — C++/Python on embedded hardware, machine vision with ONNX, tooling with Git/Docker/Apptainer — plus real IT-support and production-software experience from two summer jobs at Lindt & Sprüngli. Delivers fast and cleanly under deadline pressure.

### ROBOTICS PROJECTS & COMPETITIONS

#### Botball European & World Championship Season — Team TechSupport (HTL Wiener Neustadt)

**2026**  
ECER · GCER

- **1st place overall — ECER 2026**, European Conference on Educational Robotics (Apr 2026, Europe-wide competition).
- **3rd place — GCER 2026**, International Botball Tournament, top bracket vs. ~47 teams worldwide (Jul 2026, Norman, Oklahoma, USA).
- Developed the game strategy for a mecanum-drive bot solving the hardest and highest-scoring challenge on the entire game table.
- Wrote drum collecting & sorting algorithms used on both competition robots; programming support, code cleanup and debugging across both sub-teams.
- Co-developed the robot with teammate Amir Elmesiry; students built everything from hardware setup to the software stack.

#### Autonomous Drum Detection & Sorting — AI Vision (solo-owned robot)

**2026**  
GCER season

- Fully owned a second, differently designed drum-collecting robot at the world championship, including its AI vision system.
- Built a custom dataset (~600–700 images: blue/pink drums on white surface) and trained a YOLOv8n model exported to ONNX.
- Programmed a DrumDetector class: motion-triggered inference on camera frames, drum detection and blue/pink classification for the sorting mechanism (~400 ms end-to-end on Raspberry Pi).

#### Custom Robot Software Stack — “Wombat” Platform

**2025 – now**  
Team project

- Replacing the official KIPR libraries (libwallaby) with a freshly written, in-house stack: from low-level sensor & motor access to a clean high-level mission API.
- Full hardware bring-up by the students: Raspberry Pi 3, Linux, configuration, deployment with Git, Docker and Apptainer.

#### RoboRacer 3D Simulator (in development)

**now**  
Isaac Sim

- Co-developing a realistic 3D racing simulator on NVIDIA Isaac Sim — replacing existing 2D sims — with a 14-degree-of-freedom vehicle model tuned on real-world data.

### SKILLS

|                     |                                                                                                                  |
|---------------------|------------------------------------------------------------------------------------------------------------------|
| Languages           | Python · C++ · Java · C# · SQL · JavaScript · HTML/CSS                                                           |
| Robotics & Embedded | Raspberry Pi · Linux · Motor & sensor control · Mecanum drive · Computer vision (YOLOv8/ONNX) · NVIDIA Isaac Sim |
| Tools & Practices   | Git · Docker · Apptainer · Clean code under deadlines · IT support & troubleshooting                             |

### EXPERIENCE & EDUCATION

#### IT Support & Software Development Support — Lindt & Sprüngli, Vienna-Hietzing

**Aug 2025**  
Summer job

- IT support at a production site; hands-on support for the development of a software stack used in production.

#### IT Support — Lindt & Sprüngli, Gloggnitz

**Aug 2024**  
Summer job

- First professional IT experience: support, troubleshooting, hardware and network tasks.

#### HTL Wiener Neustadt — Informatics (IT)

**2022 – now**  
In progress

- 5-year programme ending with Matura, currently in 4th grade. Focus on software and robotics; member of the school's competition team TechSupport (robo4you).

## CURRENT GOALS

- Competing again at ECER 2027 and qualifying once more for the world championship (GCER).
- Seeking internships, summer placements (Ferialpraxis) and junior roles in software & robotics — wherever code meets hardware.