



Ryan Wüest

Robotics Engineer

- 01.04.1999
- ryan.wueest@protonmail.com
- Swiss

Social Network

- LinkedIn Profile
- Github Page

Languages

- German ●●●●●
- English ●●●●●
- French ●●●●●

Skills

Programming:

- ROS ●●●●●
- Python ●●●●●
- Git ●●●●●
- C++ ●●●●●
- MATLAB ●●●●●
- Docker ●●●●●
- Bash ●●●●●

Tools:

- Isaac Sim ●●●●●
- OpenCV ●●●●●
- Altium ●●●●●
- Pytorch ●●●●●
- Gazebo ●●●●●

Working Experience

- 2024 – now **Research Engineer in Motion Control** Inspire
 - Design damping controller for industrial applications.
 - Improve manufacturing performance at tool position by over 75%.
- 2023 – 2024 **Software and Navigation Coach** ARIS space
 - Teaching students ROS and the building blocks of a navigation stack for an autonomous robot.
- 2022 – 2023 **Navigation Lead Engineer** ARIS space
 - Development of navigation concept for underwater autonomous navigation in polar regions using planning algorithms.
 - Determine optimal sensors for underwater exploration and mapping.
 - Implementation of simulation environment to test algorithms.
- 2022 **Software and Control Intern** Fotokite
 - Optimising manufacturing process by improving quality control tests.
 - Improving internal interfaces with Qt.
 - Enhance debugging of drone, by implementing more variety in error messages.
- 2021 – 2022 **Simulation & State Estimation Engineer** ARIS space
 - Development of 3D State Estimation for student rocket.
 - Implementation of algorithm on an embedded computer.
 - Determine optimal sensors and calibration.

Education

- 2021 – 2024 **MSc in Information Tech. and Electrical Engineering** ETH Zürich
MSc Thesis Title: Scene understanding for wheelchair navigation in dynamic environments.
 - Develop scene classification using only LiDAR sensors.
 - Build simulator with synthetic data generation with NVIDIA isaac simulator.

Computer Vision
Machine Learning

Semester Project Title: Model Predictive Contouring Control on the F1TENTH Autonomous Racing Platform.

 - Implement MPC controller for optimal racing using ROS and gazebo.

Control Systems
Navigation
Mobile Robots

2018 – 2021 **BSc in Information Tech. and Electrical Engineering** ETH Zürich

Publications

2022 **In-layer Thermal Control of a Multi-layer Selective Laser Melting Process**
European Control Conference 2022

Awards

2023 Winner in the mobile robot exploration challenge ETH RobotX
 2022 SGA Award for the best bachelor thesis in automatic control. SGA

Extra-Curricular Activities

2020 – now **Football Referee** SFV

- Managing people on and around football pitch.
- Be responsible for the behaviour of all involved parties.