

Lorenzo Della Giustina

Udine, Italy

dellagiustina.lorenzo@gmail.com

github.com/lorenzodellagiustina

linkedin.com/in/lorenzo-della-giustina

Professional Summary

Computer Science Master's student with a strong interest in embedded systems. Hands-on experience in **firmware development in Rust** for ECUs in a Formula Student electric race car project. Academically curious, with interests in **algorithms**, **computational complexity**, **quantum computing**, and **verification**.

Education

- | | |
|-------------------|--|
| 10/2024 - Present | Scuola Superiore dell'Università degli Studi di Udine , Udine, IT
<i>Superiore Universitaria</i>
The Scuola Superiore Universitaria offers an internal path of excellence in interdisciplinary education, complementary to the study programs of the University of Udine. |
| 10/2024 - Present | Università degli Studi di Udine , Udine, IT
<i>Master Degree in Computer Science, Algorithms and Automated Reasoning</i>
GPA: 29.667/30 |
| 09/2021 - 10/2024 | Università degli Studi di Udine , Udine, IT
<i>Bachelor Degree in Computer Science</i>
Thesis: Camera-based Trajectory Estimation for Autonomous Vehicles Driving, Final grade: 110/110 Cum Laude (top grade) |

Projects

- | | |
|-------------------|---|
| 10/2024 - 10/2025 | Head of Driverless department , UniUd E-Racing Team - Formula SAE
<i>Rust, Python, ROS2</i>
Management of the Driverless department, responsible for software development for competing in the Formula Student Driverless cup. Specifically, design and development of ROS2-based nodes for perception, mapping and path planning. |
| 11/2021 - 10/2024 | Firmware developer , UniUd E-Racing Team - Formula SAE
<i>Rust, Embedded Software, ESP32</i>
Design of a "formula-style" racing car for the Formula Student competition. In particular, firmware development for real-time telemetry and inter-ECU communication. |

Professional Experience

- | | |
|-------------------|--|
| 09/2023 - 10/2023 | Intern , Limacorporate S.p.A.
<i>C++, Tensorflow</i>
Development of a stand-alone C++ application that performs inference on a pre-trained TensorFlow neural network model for the segmentation of data from diagnostic images. |
|-------------------|--|

Research Interests

- | | |
|---------|---|
| 10/2025 | On the (In)Security of Cryptography in the Quantum Era
<i>Quantum Computing</i>
Study on the implications of Grover's and Shor's algorithms for cryptographic security. |
| 03/2025 | On the complexity of CNOT-based circuit synthesis
<i>Computational Complexity, Quantum Computing</i>
Study on the complexity of the CNOT-based optimal circuit synthesis problem under directed topological constraints. |