

Internship / working student: Rust integration into ROS2 (f/m/div.)

👤 Career level: Student ⌚ Full time 🏠 Partly remote

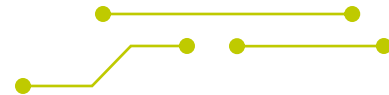
📍 Location: Berlin, Brunswick, Frankfurt, Holzkirchen, Lollar



What to expect

Exciting projects await you, in which you will help shape the digital world of tomorrow.

Enthusiasm for new technologies and cross-industry methodological expertise characterize our work. Our success is based on our innovative strength, mutual trust, appreciative cooperation, diversity and responsibility. You can look forward to a great team.



Job description

ROS2 is the de facto standard framework in robotics research and Rust is the "new rising star of programming languages". More and more robotic applications are transitioning from research to actual product status.

As Rust has some interesting features especially regarding safety and ROS2 already has rust bindings in development, this student project has the goal to explore how well does Rust interact with the ROS2 ecosystem, especially using the ROS2-Rust-bindings and whether it is applicable for commercial use or not.

Tasks that shall be worked on:

- You try to build **ROS2 Rust projects** with colcon - Attempt to run ROS Rust nodes using the ros2launch system.
- You find out, if ROS2 Rust nodes support the **ROS2 parameter handling** including dynamic reconfiguration.
- You identify **special requirements** for ros2-rust or find out if all **RMW implementations** can be used.
- You test, if those **client libraries** are realtime capable and if it does involve dynamic allocations and if so, can they be avoided?
- You compare available client libraries.

As part of this project one (or many) robotic application shall be implemented to demonstrate the capabilities of those Rust-based ROS2 client libraries.

Qualifications

- **Personality and working method:** team player with good communication skills, structured and solution oriented way of working combined with high quality awareness and independence
- **Experience and Know-How:** basic knowledge in the area of embedded software development using C/C++, experience with programming using Rust and about the general process of binary code generation beneficial
- **Education:** studies in the field of computer science or comparable field of study
- **Languages:** very good knowledge of German or English

Additional information

- **Start:** immediately / by arrangement
- **Duration:** at least 6 months



[Job offer](#)