

Looking 4 U!

#PROJECT WORK & MASTERS THESIS

Ant Robotics emerged from a mission to develop affordable and accessible robots to address basic human needs, in tough and unforgiving environments and in a sustainable manner. We develop mobile robotic platforms, software and connectivity solutions as the basis for autonomous systems in the areas of agriculture, rescue, transportation, inspection and other heavy-duty applications.



We are looking for students to join us to work on a wide range of research topics and offer supervision via the Hamburg University of Technology. We require your support as a junior member under the guidance of an experienced robotics team to bring our advanced drive platform to the next level. We are also open to your suggestions for robotics topics.

#SENSOR FUSION

Autonomous navigation through unknown dynamic environments is a challenging task, which requires fast and efficient algorithms for localization, perception, motion-planning, and control. Our robots navigate in rough terrain conditions like crop fields, building sites and dirt tracks.

Sensor fusion is an important tool enabling autonomous robots to perform complex tasks consistently. It often includes sensors on the robot and sensors in the environment combined to provide highly reliable location information. External sensors range from GNSS signals to cameras and various active beacon technologies.

#RESPONSIBILITIES

- Carry out analysis and document requirements for outdoor field navigation in open, rough terrain like farming fields considering current sensor systems.
- Select and prototype an appropriate multi-modal sensor setup
- Develop components and packages in ROS to allow autonomous outdoor navigation
- Integrate, deploy and test the autonomous outdoor navigation stack
- Research and develop robust control algorithms to follow crop lanes under different lighting conditions using optical sensors (RGB-D camera, Lidar).

#QUALIFICATIONS

- You are pursuing a degree in Mechatronics, Robotics, Computer Science, or a related field of study.
- Ideally you have already worked with the ROS navigation stack, OpenCV.
- You excel with a strong understanding of Python, C++ and embedded Linux.
- Independent team player with a solution-oriented, innovative and independent way of working Intercultural competence.
- All results achieved are to be documented parallel to the work.

#APPLICATION

Imagine a world in which organic farming is affordable for all, heavy manual labor is alleviated in developed and emerging nations and people can be protected from the fallout of natural disasters.

That is what ANT ROBOTICS stands for. You do too? Then we look forward to supporting your project work or masters thesis!

Contact us now at info@antrobotics.de. We look forward to getting to know you!

ANT ROBOTICS