

Localization & Mapping



What is Localization and Mapping?

Do you want to be a part of a team that is pushing the limits of technology? Do you want to be part of a team that is pushing the limits of what's possible in the world of driverless cars? If so, then you are at the right place in our team.

Our three modules, Perception (responsible for detecting cones), State Estimation (responsible for estimating the vehicles position, speed, acceleration, and orientation), and SLAM (Creating an optimal global map of the track and improving sensor robustness) work with state of the art concepts in order to have a proper understanding about our vehicles state and the track enabling the vehicle to drive at its limits. We are looking for a motivated student to join our driverless team and help us develop the most advanced and reliable localization and mapping system possible. As a Localization and Mapping Engineer, you will play a crucial role in ensuring that our car can navigate through complex environments with accuracy and precision.

Our Software is running using the ROS framework on Ubuntu based systems. Besides developing and implementing new concepts, you will help validating the code and test it on the car afterwards.

What will be your tasks?

- Familiarization with our existing software and concepts
- Maintaining the existing pipeline
- Validating our current modules and analyzing data in order to find improvements
- Design and implement advanced algorithms for localization and mapping
- Stay up-to-date with the latest research and trends in the field of localization and mapping
- Collaboration in software tasks within the pipeline
- Collaboration in cross-group tasks (e.g. testing, manufacturing)

What are our requirements for you?

- Motivated & Teamoriented
- Enrolled in the field of Computer Science or familiar
- Good programming skills in C++, python or other Object-Oriented languages
- Willingness to join the weekly meetings
- Experience with ROS is beneficial
- Ability to use Ubuntu in a Dual-Boot system
- Knowledge about localization algorithms, optimization algorithms and/or neural networks is beneficial
- Good communication and problem-solving skills



One goal.
One team.

Would you also like to accompany your code from your pc to the race track? Apply on our homepage!



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