

MOTION PLANNING AND CONTROL ENGINEER

Zurich

Embotech is a software company developing cutting edge motion planning technology for autonomous vehicles. We are determined to accelerate the transition towards safe autonomous transportation by leveraging the core real-time optimization technology that we have been developing since 2012.

Our team is comprised of highly skilled employees with a passion for excellence and efficiency. We are looking for highly motivated people to help us solve one of the most complex challenges of tomorrow and take our company to the next level.

As a development engineer for motion planning and motion control you will join a small team of top technical talent to develop safe, efficient and reliable trajectory generation and tracking algorithms for ground vehicles. You will be working on one or more internal and customer projects.

We offer an exciting job in a fast-growing company with attractive conditions and flexible hours. Embotech develops innovative products in a modern and dynamic environment, and you can expect an international atmosphere, with young and motivated colleagues.

Responsibilities

- Develop algorithmic solutions to unsolved problems
- Write automated testing tools to validate and improve the behaviour of your algorithms
- Document your code and designs
- Model dynamical systems
- Interface to drive-by-wire systems on real vehicles, perception, maps and driving simulators and test them on-site.
- Setup hardware-in-the-loop testing environments to validate performance against requirements
- Write latency-optimized safety-critical embedded C/C++ and Matlab code adhering to best practices
- Coordinate development efforts with other members of the team
- You will be reporting to the Head of Functionality and Testing

Requirements

- Master's degree in computer science, electrical or mechanical engineering
- Profound understanding of control theory, dynamical systems and optimal control
- Excellent knowledge in at least two of the following areas:
 - Applied model predictive control
 - Autonomous driving/motion planning
 - Advanced vehicle dynamics (modelling and control)
 - Powertrain systems and energy management
- Knowledge in one of these areas is a plus
 - Motion planning with trailers
 - Motion predictions
 - Environment model and maps
- Proficiency in C/C++ and Matlab/Simulink/Python
- Familiarity with Linux and the GNU toolchain
- Excellent communication skills in English
- Analytical problem-solving skills
- Fast familiarization with new tasks, problems and environments

Our preferred starting time for this position is
January 2022

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