

C/C++ Software Engineer

LiDAR Perception | Zurich, Switzerland

Embotech is an award-winning Swiss software scale-up bringing autonomous driving out of the lab and into real operations. We focus on private grounds, trucks moving containers at port terminals and passenger cars driving themselves through factories, where autonomy delivers value today. Our vehicles share space with people and machines, so safety is not an add-on for us: it is designed into our software from the first requirement to the final release.

As **C/C++ Software Engineer** in our **Safety Perception team**, you develop the perception software on the vehicle's safety path, the part that makes sure the way ahead is clear. At its core, **real-time LiDAR processing** provides reliable environment information and keeps the sensors precisely calibrated. You take features from concept to verified release with proper documentation and testing. If you want to see your algorithms run on real vehicles, this role is for you.

You join our Safety Software department in Zurich and work closely with system, safety and platform engineers, from requirements through simulation to tests on real vehicles. We offer attractive conditions, flexible working hours and an international team of highly skilled colleagues who care about doing things right.

Responsibilities:

- Design, implement and optimise real-time perception algorithms based on LiDAR point-clouds in modern C++.
- Own LiDAR calibration and misalignment detection algorithms.
- Take safety perception features from concept to release: requirements, algorithm design, implementation, tests, documentation and reviews.
- Develop according to our safety development process (ISO 13849 / ISO 26262) with traceability from requirements to tests.
- Write unit and integration tests and simulations covering functional and technical safety requirements.
- Conduct formal code reviews and write safety-relevant code.
- Improve software patterns for deterministic memory handling, warning and error management.
- Support continuous integration, vehicle testing and internal and external customers.

Requirements:

- Master's degree in computer science, electrical engineering, robotics or equivalent.
- 3+ years of professional software development in C and modern C++.
- Proven hands-on experience in LiDAR data processing (point-cloud filtering, segmentation, clustering, registration or calibration).
- Solid understanding of 3D geometry, coordinate transformations and sensor calibration.
- Experience with distributed real-time systems on Linux/POSIX and network protocols (UDP, TCP/IP, CAN).
- Experience with git, CI/CD and automated testing; Rust or Python is a plus.
- Experience in regulated software development (ISO 26262 / ISO 13849 / IEC 61508 / ASPICE) is a strong plus.
- Rigorous, self-organised and communicative team player who takes ownership.
- Very good oral and written English.

This is a **permanent position** based in our **Zurich office**. Our preferred starting time is **ASAP**.

We look forward to receiving your application documents (CV, cover letter & reference letters).

Contact:
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