

# MARCO CASAGRANDE

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<https://github.com/bighouwski/portfolio>

## EXPERIENCE

JAN 2024 - ONGOING

**EMBEDDED SOFTWARE ENGINEER**- ABBOTT AUTOMATION SOLUTIONS GMBH

Analysis and development of medical-grade embedded software in complex automated systems.

MAR 2023– DEC 2023

**EMBEDDED SOFTWARE ENGINEER**- SLASHWHY GMBH, GERMANY

Design, development and testing of software on embedded devices for industrial systems and applications.

SEP 2021– FEB 2023

**PERCEPTION ALGORITHM DEVELOPER** - MICROVISION GMBH – FORMERLY IBEO AUTOMOTIVE SYSTEMS GMBH, GERMANY

Development of automotive perception algorithms based on LiDAR point cloud data.

Relative vehicle localization with respect to an airplane.

Lane extraction marking and tracking.

OCT 2019 – AUG 2021

**WORKING STUDENT** - IBEO AUTOMOTIVE SYSTEMS GMBH, GERMANY

Creation of simulation scenarios in *CarMaker* for testing autonomous driving functions.

MAY 2018 – SEP 2019

**PROJECT ENGINEER** - IBEO AUTOMOTIVE SYSTEMS GMBH, GERMANY

Validation of customer perception stack via a proprietary reference system, providing ground truth and related KPIs.

AUG 2016 – JAN 2017

**ENGINEERING INTERN** – ROBERT BOSCH GMBH, GERMANY

MAY 2011 – MAY 2014

**JR. FULL-STACK DEVELOPER** – FB SERVICES SRL, ITALY

## EDUCATION

OCTOBER 2019 – AUGUST 2021

**M. SC. ICT INNOVATION**, KTH STOCKHOLM, TU BERLIN

Degree project: "Relative pose estimation of a plane on an airfield with automotive-class solid-state LiDAR sensors", GPA: 1.0

RELEVANT COURSES:

- Robotics
- Laser Scanning Technologies
- Event-based robot vision
- Reinforcement Learning

SEPTEMBER 2014 – APRIL 2018

**B. SC. INFORMATION ENGINEERING**, HAW HAMBURG

Degree project: "Robust setup of an Autonomous Mobile Robot research platform with multi-sensor integration in ROS", GPA: 0.9, HAW Best Graduate Award 2018

RELEVANT COURSES:

- Software Engineering
- Algorithms and Data Structures
- Introduction to Computer Graphics
- Electronics
- Microcontrollers
- Digital Signal Processing

## SKILLS

- Algorithm development
- LiDAR sensor data processing
- Embedded software
- Distributed systems
- Agile development
- Clean coding
- Resources optimization
- Proficient: C++, CMake, Unit-Testing, CI/CD, Git, ROS, MQTT, Linux
- Familiar: C, C#, Python, Java, Docker, Qt, CAN communication
- Learning: Rust
- Tools: Jira, Confluence, VS Code, GitLab, BitBucket, Azure DevOps
- German B2, English C1, Italian

## EXPECTATIONS

- Challenging and interesting tasks
- Room for creativity
- Training opportunities
- Career possibilities
- Working with modern technologies and tools
- Working occasionally from abroad
- Family-friendly employer
- Openness to discuss the status-quo and to improve existing processes

## OTHER RESOURCES

References, degrees, awards as well as short videos of some projects I worked on are available on my portfolio page: <https://github.com/bighouwski/portfolio>