



Robotics Software Developer

JOSEF GSTOETTNER

ROS/ROS2 | C++ | Python | Gazebo

CONTACT

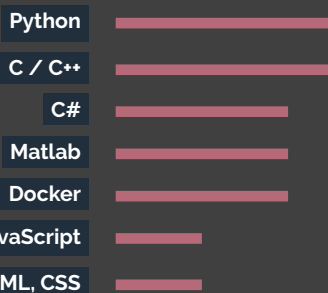
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<https://josefgst.github.io/blog/>
LinkedIn

SKILLS

Areas of specialization

- ROS / ROS 2 (Navigation, SLAM, MoveIt)
- Robot Simulation in Gazebo & Isaacsim
- Behavior trees, robot task management
- Embedded software (STM32, Arduino)
- Single board computers (Raspberry Pi, Jetson)

Programming



OS: Windows, Linux

Languages

English | Full Professional
Mandarin | Limited Working
German | Native

Learning & Hobbies

- PCB design with KiCAD
- Android development

C++ and Python developer specialized in ROS, navigation, SLAM and behavior trees for reliable autonomous mobile robots. Have a strong understanding of mechanical engineering principles, object-oriented programming and robot dynamics to optimize system performance.

WORK HISTORY

Assistant Research Engineer 2025/9–present

ROS ROBOT PROGRAMMING · HKCRC | Sciences Park

- Develop autonomous tasks and recovery behaviors for a water tank cleaning robot using behavior trees.
- Set up navigation, SLAM & coverage planner to fully clean the whole surface.
- Packaged robot software and tools with Docker for easy deployment.
- Create realistic Gazebo simulations for faster iterations and testing.



System Engineer 2022/4–2024/8

ROS ROBOT PROGRAMMING · LSCM | Sciences Park

- Set up navigate & SLAM (Cartographer, SlamToolbox, ...) for 2D/3D mapping of large areas.
- Simulated robots in Gazebo for testing and faster development.
- Developed autonomous docking utilizing AprilTags for precise movement.
- Tuned PID controllers for smooth movement and speed control.



Research Assistant 2020/7–2022/3

EMBEDDED SOFTWARE · HKUST | Clear Water Bay

- CAD design for 3D printing and laser cutting of prototypes.
- Firmware development on a low-power IoT accelerometer with BLE Mesh for predictive maintenance based on Nrf52.



Mechanical Engineer 2019/8–2020/4

CAD DESIGN · KALBAS | Cheung Sha Wan



EDUCATION

Master of Science: Mechanical Engineering 2018/9–2019/6

· HKUST | Clear Water Bay



One Year Mandarin language study 2017/9–2018/6

· 西南交通大学 | 四川峨嵋 | 汉语水平考试四级



Bachelor of Science: Mechanical Engineering 2014/9–2017/6

· University of Applied Sciences Upper Austria | Austria



PROJECTS

Robomaster 2021/10–2022/4

SOFTWARE TEAM · HKUST

- SLAM and navigation for autonomous Robots in ROS
- Embedded software development on STM32.



Autonomous RC-car race (first place 🏆) 2020/12–2021/3

IMITATION LEARNING · HKUST <https://github.com/JosefGst/autorace>

- Trained Pytorch model to be used on Jetson Nano for autonomous-driving, obstacle avoidance and overtaking of other cars.

