Software Developer

JOSEF GSTOETTNER

Masters in Mechanical Engineering HKUST

INFO

Contact

+852 9322 5289
@ jgstoettner@connect.ust.hk
https://github.com/JosefGst
https://josefgst.github.io/blog/
Linkedin

EDUCATION

- 2019 HKUST, Masters in Mechanical Engineering
- 2017 University of Applied Sciences Upper Austria, Undergraduate in Mechanical Engineering

SKILLS

Areas of specialization

- ROS / ROS 2
- Robot Simulations in Gazebo & Isaacsim
- Embedded software for ESP32, Arduino, STM32, NRF52
- CAD design in Fusion360 & Solidworks
- 3D printing, CNC machining and laser cutting

Learning & Hobbies

- PCB design with KiCAD
- Game development in Godot
- Mandarin and Cantonese

Languages

English	fluent
Mandarin	conversational
Cantonese	basic
German	native

IT & programming

- python
- C / C++
- C#
- Matlab
- Docker
- javascript
- html, css

OS:

C++ and Python developer with experience in ROS. Makes robots navigate autonomously. Well rounded mechatronics engineer. Can work on software and mechanics.

Short Resumé

System Engineer 2022/4–2024/8
ROS ROBOT PROGRAMMING · LSCM
- Made robots navigate autonomously and safe with extensive parameter tuning.
- Set up SLAM (cartographer, slamtoolbox, rtabmap) for mapping of large areas.
- Simulated robots in Gazebo for testing and development.
- Create ros-nodes to interface with actuators and sensors via Serial or RS485.
- Developed autonomous docking utilizing apriltags for precise movement.
- Established communication to server via MQTT for fleet management.
- Tuned PID controllers for smooth movement and speed control.
- Experience with wide range of sensors (3D LiDAR, depth cameras, IMU, GPS).

Research Assistant 2020/7–2022/3
EMBEDDED SOFTWARE · HKUST
- Developed a weight scale with RFID scanner for automated storage records in chemical Labs on Arduino MCU.
- CAD design for 3D print and laser cut of prototypes.
- Firmware development on a low power IoT accelerometer with BLE Mesh for predictive maintenance based on Nrf52.
- Simulated steal beam in Ansys for natural frequency analysis.

Mechanical Engineer 2019/8–2020/4
CAD DESIGN · KALBAS
- Designed, 3D-printed and created tool-paths for CNC machining of fish lure prototypes.

Projects

Lingao ROS 2 2023/8
ROS 2 · Personal Project https://github.com/JosefGst/lingao_ros2
- Built an autonomous mobile robot from scratch for outdoor environment.

Red Bird Racing 2021/11–2022/4
AUTONOMOUS RACING · HKUST
- Cone detection with OpenCV and autonomous race car control-algorithm in ROS

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.