

MUSTAFA KURAL

ON, Canada | 289.990.62.97
kuralme@protonmail.com | linkedin.com/in/kme9 | kuralme.github.io

HIGHLIGHTS OF QUALIFICATIONS

- Bachelor's degree in Control and Automation Engineering with focus on programming and robotics
- 2 years of experience in robotics software development using C++ and Python with OOP, leveraging ROS/ROS2, Gazebo, MoveIt2, OpenCV, PCL, and PyTorch
- Hands-on integration and troubleshooting of hardware components including LiDAR, cameras, IMUs, motors, SBCs (Raspberry Pi, Jetson, LattePanda), and embedded systems (STM32, Arduino)
- Skilled in hardware interface protocols (USB, UART, Serial, I2C) and validating software-hardware systems in lab and field environments
- Proficient in developing, testing, and deploying robotics modules in Linux (Ubuntu) with Bash/Python scripting and containerized environments using Docker and Conda
- Experienced with unit testing (GTest, Rostest), CI/CD pipelines (Jenkins), and version control and project management tools (Git, SVN, CMake, Jira)

EXPERIENCE

- Robotics Software Engineer, Milvus Robotics** June 2023 - Jan 2024
- Developed a human-following module for an Autonomous Mobile Robot (AMR) utilizing a 2D LiDAR system. The process involved data filtering, leg detection from laser points, tracking of leg pairs, and implementing path-following algorithms to physically trail a human. This helped my company meet the demand of a new customer, increasing its revenue. **ROS, C++, Python, OpenCV, Pykalman, A***
 - Worked on a line detector to improve navigation of AMRs in warehouses. **C++, OpenCV**

- Software Engineer, Polonom Robotics** Sep 2022 - June 2023
- In a collaborative robotics project, implemented deep learning inference for object detection and tracking. Developed a script to extract 3D object locations by matching LiDAR point clouds with detected bounding boxes. Additionally, created custom ROS messages to facilitate multi-robot communication. These contributions enabled the company to maintain collaboration with a defense industry agency. **ROS, C++, PCL, OpenCV, Python, Pytorch**
 - Updated and improved old submodules of a service robot which assisted while finding a new customer for the product. **ROS, C++**

EDUCATION | CERTIFICATES

The Construct, Online Certificate, Robotics Developer Masterclass, 2025

Coursera, Online Certificate, Self-Driving Cars Specialization, 2024

EdX, Online Certificate, Autonomous Mobile Robots, 2021

Istanbul Technical University, **BSc Diploma**, Control and Automation Engineering, 2018

COMPUTER SKILLS

OS : Ubuntu Linux, Windows

Languages : C++, Python, MATLAB, C/Embedded, JS, HTML, LaTex

Programming: ROS, ROS2, Gazebo, MoveIt2, OpenCV, CUDA, Pytorch, TensorFlow, STM32

Dev Tools : Bash, Docker, Conda, Git, Svn, Gtest, Rostest, Jenkins, Jira