europass

Raidhu Beiucy Duraisamy

Passport: U8056232 **Nationality:** Indian **Date of birth:** 27/08/1998

Place of birth: Erode, India **Gender:** Male **Phone number:** (+91) 8667637796

Phone number: (+91) 8667665900 **Email address:** raidhu1998@gmail.com

LinkedIn: https://www.linkedin.com/in/raidhu/

Github: https://github.com/raidhu

Home: 5/128, Sandhai medu, Seerampalayam, Namakkal, Tamil nadu, 638008 Namakkal (India)

ABOUT ME

Innovative Robotics Engineer specializing in AI-powered automation, with 4+ years of experience designing and deploying ROS-based robotic systems. Passionate about bridging the gap between machine intelligence and real-world applications, I thrive on solving complex challenges in perception, motion planning, and autonomous decision-making. Committed to advancing the future of robotics through human-centric AI integration and scalable automation solutions.

WORK EXPERIENCE

Robotics Software Engineer, Deployment

THE NOVUS HI-TECH ROBOTIC SYSTEMZ LTD [14/02/2022 – Current]

City: GURUGRAM | **Country:** India | **Website:** www.novushitech.com

Software Engineering
• Wrote firmware for mobile robots in C/C++ and Python.
• Implemented robot autonomy using ROS/ROS2 (including perception, planning, and control stacks).
• Containerized ROS nodes using Docker for modular deployment.
Perception
• Optimized RTAB-Map's loop closure detection for improved SLAM accuracy.
• Enhanced memory management efficiency, reducing system overhead by implimenting system logger.
• Reduced computational load by optimizing real-time mapping parameters for large-scale environments.
Navigation & Path Planning
• Contributed to obstacle detection setup via lidar for collision-free navigation in dynamic environments.
• Contributed to path planning algorithms, Linear Interoplation and Spline Interpolation.
Integration
• Integrated autonomous stacker robot with elevators/lifts via API communication.
• Enhanced point cloud processing for pallet detection by minimizing noise using intensity-based filtering in ABOPT (Autonomous Battery-Operated Pallet Trucks).

Robotics engineer

UNIQUE INC [12/10/2020 – 14/01/2022]

City: BANGLORE | **Country:** India

Developed a ROS-based mobile robot for UV sanitization, automating disinfection processes in dynamic environments. Designed a Python script to control UV lamps based on time intervals and waypoint locations, ensuring thorough coverage. Integrated sensor fusion techniques (LiDAR, IMU, and depth cameras) to enhance localization accuracy and obstacle detection, enabling safe and efficient navigation. Conducted system testing and validation to verify functionality and optimize performance.

EDUCATION AND TRAINING

Bachelor of Engineering in Mechatronics

Anna University Affiliated (K.S.R. College of Technology) [21/05/2016 – 17/04/2020]

City: Namakkal | **Country:** India | **Website:** https://www.ksrct.ac.in/ | **Final grade:** 6.69 | **Thesis:** Wireless data tranfer using wifi module and MQTT protocol for IoT & robotics application.

Developed an IoT control system using ARM microcontroller and ESP8266 WiFi module to enable internet-based device control. Implemented ESP8266 libraries and MQTT cloud protocol for bidirectional data communication, utilizing Eclipse Mosquitto as the MQTT broker for secure data transfer.

Higher Secondary Education

Reliance Matriculation Higher Secondary School [08/03/2014 – 17/05/2016]

City: Namakkal | **Country:** India | **Website:** https://rmhss.co.in/

Primary Education

Reliance Matriculation Higher Secondary School [12/02/2012 – 18/02/2014]

City: Namakkal | **Country:** India | **Website:** https://rmhss.co.in/

LANGUAGE SKILLS

Mother tongue(s): Tamil

Other language(s):

english, hindi and telugu

LISTENING C1 **READING** B2 **WRITING** B2

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

German

LISTENING A1 **READING** A1 **WRITING** A1

SPOKEN PRODUCTION A1 **SPOKEN INTERACTION** A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

SKILLS

docker / blender / Ubuntu / AWS / python / C++ / OOPS / ROS AND ROS2 / Mobile robots / RTAB-map / slam / ubuntu / Containerization with dockers / Opencv / point cloud

HONOURS AND AWARDS

[21/05/2019] Bannari Amman Institute of Technology
1st Place Winner, Line Follower Robotics Competition

[03/04/2019] KSR College of Technology
Event Organizer - Robo-Soccer Robotics Competition