Dany Rashwan

dannirash@outlook.com | (210) 748-5686 | danyrashwan.com | linkedin.com/in/dany-rashwan

Autonomous Systems Engineer · ROS2 · Navigation (Nav2) · SLAM · Perception

SUMMARY

Robotics and autonomous systems engineer focused on deploying reliable autonomy stacks from simulation to real hardware. Experienced in ROS2-based navigation, SLAM, perception pipelines, and edge inference optimization on NVIDIA Jetson platforms. Strong emphasis on system integration, testing, and safety-critical deployment.

EXPERIENCE

Autonomous Systems Engineer Jan 2025 – Present
Rovex Technologies Corporation Gainesville, FL

- Design and integrate autonomy software for a healthcare robotic platform, spanning navigation, localization, and perception subsystems.
- Develop ROS2 nodes and launch configurations with an emphasis on reliability, traceability, and maintainability.
- Support system-level testing, verification, and regulatory preparation workflows for deployment in clinical environments.
- Collaborate cross-functionally with mechanical, electrical, and compliance teams to ensure end-to-end system readiness.

Robotics Engineer Researcher May 2024 – Aug 2024
University of Florida (Undergraduate Research) Gainesville, FL

- Designed and implemented custom ROS packages for mobile robot control, navigation, and state estimation.
- Integrated EKF-based localization within Gazebo simulations to improve robustness under sensor noise and drift.
- Defined system architecture and presented experimental results to faculty reviewers and research stakeholders.

Machine Learning Engineer Intern May 2023 – Aug 2023
Flapmax Remote (Austin, TX)

- Built a tumor-detection model for MRI scans achieving **95% accuracy**; iterated on data and model improvements.
- Improved privacy and training workflow using Federated Learning.
- Reduced inference time by **4×** via OpenVINO optimization compared to TensorFlow.

Account Specialist Nov 2020 – Jun 2021
UF Help Desk Gainesville, FL

- Supported students and faculty with account, technical, and end-computing issues.
- Managed directory information for **200+** staff members and resolved **100+ tickets/week**.

Math Tutor Feb 2019 – May 2020
Math Studio, Santa Fe College Gainesville, FL

- Tutored **200+** students across Intermediate Algebra through Calculus I–III.

PROJECTS

Autonomous Hospital Transport Robot Jan 2024 – Dec 2024
CEN4908C (Computer Engineering Design) University of Florida

- Designed an autonomous robot concept for transporting goods within a hospital environment.
- Implemented and validated navigation and localization pipelines in simulation with a focus on hospital-like constraints (narrow corridors, dynamic obstacles).
- **Stack:** ROS2, Python, Gazebo, SolidWorks, SLAM, RViz, LiDAR, Camera, Jetson Orin Nano.

Mood Music Sep 2023 – Nov 2023
CEN4721 (Human-Computer Interaction) github.com/dannirash/Mood-Music

- Built a web app that suggests a Spotify playlist based on detected or user-selected mood.
- **Stack:** OpenCV, Flask, Python, Spotify API, HTML/CSS, JavaScript.

SKILLS

- **Autonomy & Robotics:** ROS2, Nav2, SLAM, Localization (EKF), Gazebo, RViz, OpenCV, OpenVINO
- **Programming:** C++, Python, Embedded C, JavaScript, MATLAB
- **AI & Perception:** Classical CV, Edge Inference Optimization, Sensor Fusion
- **Systems & Tools:** Git, GitHub, Jetson (Nano / Orin), AWS, SolidWorks, Altium, Quartus

LEADERSHIP & CERTIFICATIONS

Council Member, International Center Council (UF) Jan 2023 – Dec 2024
Co-founded council to advocate for 1,000+ international students; shaped strategic support programs.

Certifications: Dassault Systèmes Associate Mechanical Design (2020) · CRLA Certified Math Tutor (2019)