Jai Sharma

Arlington, VA | sh.jai104@gmail.com | (765) 701-3183| LinkedIn | Github

SUMMARY

Robotics Automation Engineer with 3+ years of experience delivering end-to-end automation solutions, from high-fidelity simulation to on-site commissioning. Strong track record for leading internal improvement initiatives, shaping system architectures for complex robotic fleet systems, and serving as a site-driven SME bridging product, project, safety, and customer execution.

Key Strengths: Site Deployment, Project Engineering, Internal Tooling, Simulation, Feasibility Analysis, Sales Support, Bluebotics

WORK EXPERIENCE

Oceaneering Mobile Robotics, Arlington, VA – Automation Engineer [link] **July 2023 – Present**

develops and deploys fleets of counterbalance forklift and underriders to fulfill material handling automation needs.

- Supported successful **end-to-end deployment** of Autonomous Fork Trucks (AFTs) in diverse customer environments. Led requirement scoping, simulation feasibility, and SATs to ensure 100% compliance with customer success metrics.
- Led a **101-AFT fleet simulation** effort for a tier-1 automotive manufacturing facility. Achieved a 2x increase in operational throughput by iteratively optimizing the fleet distribution, traffic logic, and charging strategies.
- Developed **project-agnostic Python scripts** to automate site data analysis. Converted complex logs into intuitive performance dashboard, offering a standardized framework to validate customer KPIs like cycle times, flow rates and fleet utilization.
- Founded the internal **"Automation Engineering Wiki"** - a shared knowledge database for the project team to stores best practices, lessons learned and technical standards for common engineering tasks.
- **Supported pre-sales activities** by performing site-surveys, validating technical feasibility, and leading on-site pilot programs. Directed high-stake, on-site and tradeshow product demonstrations on behalf of sales team.
- Validated vehicle safety fields per ISO 3691-4:2023. Refined technical documentation and created standardized field-testing checklists to ensure consistent **safety compliance** across diverse AFT payload profiles
- Leveraged direct exposure to customer environments to deliver **structured feedback to the product team**, ensuring future versions incorporated meaningful improvements in product reliability and deployment speed.

Kick Robotics LLC, Bethesda, MD – Robotics Engineer Intern **January 2022 –June 2023**

develops and deploys AMRs that provide real-time, actionable insight into water, air, and soil quality

- Entrusted by senior management to lead regular **client demos**. Exhibited system reliability and solution feasibility at prospective site environments, to gain essential technical buy-in from stakeholders.
- Built a **ROS 2 simulation pipeline** to test and validate SLAM and navigation capabilities of the autonomy stack.
- Developed and implemented **localization strategies** for the mobile robot in both indoor and outdoor environment.
- Deployed **Extended Kalman Filter** to fuse wheel odometry, IMU and GPS data streams for non-linear state estimation.
- Contributed to the design of 3D-printed hardware, electronics, and drive components for Warehouse and Farm robots. Owned sensor suite integration including LiDAR, cameras, IMU, GPS, and motor drivers for initial prototype cycles.

EDUCATION

University of Maryland, College Park, MD - *Master of Engineering, Robotics* **August 2021 – May 2023**

Purdue University, West Lafayette, IN - *Bachelor of Science, Mechanical Engineering, Entrepreneurship* **August 2017 – May 2021**

ENGINEERING PROJECTS

ARIAC - Agile Robotics for Industrial Automation (ROS2, C++, Gazebo, RViz) [link] **January 2023 – May 2023**

- Developed a simulated warehouse execution software on ROS 2, to accept and execute kitting and assembly tasks from server.
- Programmed AGVs and UR10 manipulators to address agility challenges like faulty parts, sensor blackout and robot malfunction.
- Enhanced software agility of our solution by focusing on knowledge representation, planning and decision making.

Navigation Stack for 3-wheel robot (ROS2, Python, Nav2, SLAM) [link] **June 2022- July 2022**

- Built a ROS2 simulation pipeline for a robot to map, plan paths and navigate around a simulated Gazebo world.
- Localized the robot by leveraging Extended Kalman Filter, slam_toolbox and AMCL algorithms.
- Implemented Nav2 functionalities to move the robot from point A to point B while dynamically avoiding obstacles.