SAMEER ARJUN SATHEESH

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EDUCATION

University of Maryland, College Park — *Aug 2022 - May 2024*
Master of Engineering in Robotics | CGPA: 3.78/4.00

Visvesvaraya Technological University, India — *Aug 2016 – Aug 2020*
Bachelor of Engineering in Mechanical Engineering | CGPA: 8/10

SKILLS

Programming Languages: Python, C++, MATLAB, Ladder Logic, PLC & HMI Programming
Engineering Design & Analysis: Siemens NX, ANSYS, ABAQUS, SolidWorks, AutoCAD, CATIA, Revit
Libraries and Tools: ROS, SLAM, OpenCV, GD&T, SAP & Windchill PLM systems, AnyLogic, TCP/IP

WORK EXPERIENCE

Toyota Material Handling / The RAYMOND Corp. | *Applications Engineer II* — *Jul 2024 – Present*

- Deployed autonomous forklift systems using Kollmorgen NDC Solutions for AGV path planning, mission logic, and system architecture, enhancing operational efficiency and scalability across client facilities.
- Developed and optimized site layouts leveraging CAD tools and localization strategies, enabling high-precision navigation and adaptive routing for AGV fleets.
- Troubleshot and resolved system-level issues using Wireshark, CAN analyzers, and PLC diagnostics, improving logic robustness and reducing downtime
- Integrated AGV platforms with WMS/ERP systems via APIs, automating task execution and enabling real-time inventory visibility
- Delivered technical training and authored comprehensive documentation, accelerating customer onboarding and empowering internal support teams

Stanley Black and Decker Inc. | *Electro-Mechanical Engineering Intern* — *Jun 2023 - Aug 2023*

- Designed and analyzed trigger modules for Single Board Solution architecture using CATIA, resulting in improved mechanical integrity and manufacturability of power tool components
- Conducted failure analysis on DeWalt power and impact drill modules through structured testing and diagnostics, resulting in corrective design proposals that enhanced product reliability.
- Developed a product launch pipeline for a new CraftsMan EV Charger as part of the intern innovation challenge, resulting in a strategic roadmap for future electrification initiatives.

MOLEX India Business Services Pvt. Ltd. | *G E T* — *Mar 2021 - Jul 2022*

- Designed power and signal connectors using Siemens NX, improving packaging efficiency across product lines.
- Simulated drop tests with FEA, enhancing connector durability and cutting time-to-market, saving ~$1M annually.
- Validated liquid cooling for server connectors, boosting current capacity by 120% and earning recognition at OCP Global 2022.

PROJECTS

Autonomous Robot – Localization, sensor fusion, path planning, hardware implementation - *YouTube*

- Built autonomous 4 wheeled differential drive robot, with a parallel jaw gripper for pick and place operations.
- Control was achieved using onboard Raspberry Pi4, which included camera, ultrasonic sensor, motor encoders and 3 Axis Inertial Measurement Unit controlled by Arduino Nano.

Swarm robots for industrial applications - C++, ROS2, Python, Gazebo - *GitHub*

- Implemented swarm robot setup with 20 TurtleBots with simultaneous navigation (MAPP) on ROS 2 Humble and Python to aid in industrial emergencies. This development was implemented using an Agile Iterative software development process.

Path planning of TurtleBot using RRT*N algorithm – Python, Robot path planning - *GitHub*

- Implemented RRTN algorithm on TurtleBot sim, optimizing shortest-path planning across multiple maze scenarios with improved computational efficiency

Time varying ankle impedance – MatLab - *GitHub*

- Conducted analysis of the inversion-eversion of ankle joint for the estimation of ankle impedance control required for a human rehabilitation system using an Anklebot robot.

Ackermann steering controller - C++, API - *GitHub*

- Implemented Ackermann steering controller based on PID control logic, developed in Agile Iterative process and pair programming software development techniques.

ACHIEVEMENTS

Best Research Paper Award | Make in India, Research Paper Contest, Project Council, Government of India
Winner at Super Float Idea Challenge | MOLEX India Business Services Pvt. Ltd.