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*

- Led pilot deployment of autonomous VNA forklift systems as project POC 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.
- Coordinated global project efforts from the India team and simulated drop tests with FEA, enhancing connector durability, reducing time-to-market, and driving ~$1M in annual savings across international product lines
- 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 an autonomous four-wheeled differential drive robot with a parallel jaw gripper for pick-and-place operations using computer vision controlled via Raspberry Pi 4, integrating camera, ultrasonic sensor, motor encoders, & 3-axis IMU managed 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.