STAINES RAJITH

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Webpage

EDUCATION

Robotics, Mechatronics and Control Engineering BEng (Hons)   **Loughborough University**
Oct 2021 - Jun 2024

- **Key Projects:** Eco-Friendly Intra-Campus Monorail System Design, Gymnastics Stamp-bug and Rover, Roll-angle measurement device.
- **Key Modules:** State Space Control, Manufacturing Automation and Control Systems, Electronics, Programming, Interfacing with Mechatronics Systems.

Robotics and Artificial Intelligence MSc   **Queen Mary University of London**
Sep 2025 – Sep 2026

SKILLS

- **Problem Solving –** Resolved an LED array failure in a robotics project by diagnosing wiring issues, testing components, and troubleshooting power supply faults. Implemented targeted repairs, restoring full functionality and improving system reliability.
- **Communication –** Enhanced coordination in a monorail design project by introducing structured check-ins. Improved workflow efficiency, minimized misunderstandings, and ensured project alignment through clear communication and active listening.
- **Teamwork –** Optimized team performance in a renewable energy project by delegating tasks based on expertise, streamlining development, and delivering solutions efficiently. This experience aligns with managing electrical projects and collaborating with production teams to improve systems and achieve right-first-time outcomes.
- **Adaptability and continuous learning –** Integrated new biocompatible materials into a Neuro-prosthesis design by researching industry advancements. Improved device performance by leveraging emerging technology, ensuring a more effective and innovative solution.
- **Engineering & Design Tools –** Proficient in industry-standard CAD software, including CATIA and Siemens NX, for advanced 3D modelling and product design, as well as AutoCAD for precise 2D engineering drafting. Experienced in Webots for simulating and analysing robotic systems and skilled in MATLAB (including Simulink) for numerical analysis, system modelling, and simulations to optimize engineering solutions.
- **Programming & Automation –** Skilled in Python for automation scripting and data analysis, with basic knowledge of C++. Experienced in ROS for robotic system development and simulation, as well as Arduino for embedded system prototyping. Knowledgeable in PLCs (Siemens) for industrial automation and control systems, leveraging automation to improve efficiency and reliability in engineering applications.

OTHER PROJECTS

Autonomous Drone Infrastructure Inspection System (In Progress)

- Engineering an autonomous drone simulation for infrastructure inspection with OpenCV for real-time image analysis.
- Optimising flight performance by developing a PID control system for stability.
- Applying linear regression as a predictive maintenance algorithm to forecast structural issues from inspection data.

WORK EXPERIENCE

Smyths Toy Store – Retail Assistant
Nov 2024 – Dec 2024

- Delivered exceptional customer service, resolving product queries and assisting with purchases, demonstrating strong problem-solving and communication skills.
- Organised and maintained store displays and inventory, ensuring accurate stock levels and visual merchandising, showcasing attention to detail and time management.

First Quantum Mineral Ltd – Control Engineering Intern
Jul 2022 – Aug 2022

- Developed and implemented PLC software solutions and designed functional traffic light systems, recognised for their effectiveness and practical impact.
- Gained proficiency in CODESYS, using structured text and ladder logic to complete complex coding tasks, improving project timelines and accuracy.

Trident College – Teaching Assistant
Jan 2021 - Mar 2021

- Supported high school students with personalised tutoring and facilitated lab experiments, improving academic performance and lab safety.
- Assisted teachers with grading and classroom activities, streamlining feedback delivery and enhancing student engagement.

CERTIFICATIONS

- **EV Engineering Advanced Job Simulation** – Forage (Ford)
- **C++ programming** – OpenEDG C++ Institute
- **Programming with Python** – OpenEDG Python Institute
- **Career Essentials in Software Development** – Microsoft
- **AutoCAD 2D** – CADD Centre Training Services Pvt. Ltd
- **Python** – Croma Campus Pvt. Ltd
- **AWS Release and Deploy** – edx
- **PLC Programming** – Udemy

EXTRACURRICULARS

Languages

- English (Native), Tamil (Native), French (Basic).

Volunteering

- Coordinated annual day trips from Trident College to Maheba Refugee Camp (UNHCR) (2018-2019).

Activities

- Cycling, Cross Country, Squash, Rugby, Cricket, Music.