

Thisara Samarasekara

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PROFESSIONAL SUMMARY

Dual-discipline engineer with a BSc (Hons) in Mechanical Engineering and 3+ years of professional software engineering experience at the London Stock Exchange Group. Mechanical foundations span PLC systems, manufacturing processes, CAD/FEA design, and project delivery including a global IMechE competition win and a full manufacturing plant relocation. Software capability covers high-performance C++ (low-latency, multi-threaded, distributed systems), cloud platforms (AWS), CI/CD, and full-stack SaaS development. This rare combination enables a genuinely systems-level perspective: physical hardware intuition informing software architecture, and software rigour applied to mechanical problems. Ideally positioned for Mechatronics, Systems Engineering, IoT, Digital Twin, or Engineering Automation roles.

TECHNICAL SKILLS

PLC & Embedded Systems: Siemens PLC, Allen Bradley PLC, Yokogawa

Software & Languages: C++/C, Python, SQL, Shell Scripting

Mechanical Design: SolidWorks, AutoCAD, NX (Siemens), Revit

Simulation & FEA: Ansys Maxwell, Ansys Mechanical, Siemens Tecnomatix Jack

Manufacturing: Lathe, milling, welding, motor vehicle technology, fabrication

Cloud, DevOps & CI/CD: AWS, Docker, Kubernetes, Jenkins, Git, Linux

PROFESSIONAL EXPERIENCE

Unilever Sri Lanka Pvt Ltd

Supply Chain Training Engineer Oct 2020 – Jun 2021

- Managed the relocation of the Vim powder and Vim soap manufacturing lines – drew up layout plans, coordinated contractors on-site, and kept the project compliant with safety, health, and environmental standards throughout.
- Designed and built a dust extraction system end-to-end. Ran the airflow and pressure calculations, specified the components, and supervised fabrication and installation on the factory floor.
- Modelled and fabricated hoppers for an auto dosing system and perfume-filling tank. Oversaw technicians during Loss-in-Weight (LIW) system installation and assisted with panel board wiring.
- Built a mobile work-order app to replace paper-based maintenance reporting – cut admin time and gave the engineering team a cleaner record of faults and work history.

Colombo Port Services (Pvt) Ltd — CICT Terminal

Shift Engineer Oct 2022 – Apr 2023

- Responsible for the maintenance and repair of the inter-terminal prime mover fleet (110 units) in South Asia's most efficient deep-water terminal, maintaining availability for a facility handling over 3 million TEUs annually.
- Designed and ran a preventive maintenance programme for the full fleet: scheduled inspections, tracked defect patterns, and coordinated repairs to reduce unplanned breakdowns.
- Restructured the engineering stores – audited stock, mapped spare part demand patterns, and reorganised inventory so high-demand parts were always on hand, cutting maintenance delays.
- Analysed maintenance logs to identify recurring failure trends across the fleet, shifting the team from reactive repairs to pre-emptive fault management.
- Built a mobile maintenance-management app to digitise job cards and reporting, replacing manual logbooks and giving supervisors real-time visibility of fleet status.

London Stock Exchange Group (LSEG)

Senior Software Engineer Apr 2025 – Present

- Primary engineer for end-to-end architecture and delivery of scalable, production-grade components for critical global exchange infrastructure.
- Reduced process startup sequence time by 72% — applying the same analytical root-cause approach and optimisation mindset used in mechanical engineering to software performance problems.

- Developed low-latency, multi-threaded distributed systems in C++
- Led code-quality initiatives (ASan, Valgrind, Coverity) enforcing production-grade reliability — a zero-defect standard directly analogous to safety-critical physical engineering.

London Stock Exchange Group (LSEG)

Software Engineer Jun 2024 – Mar 2025 | London, UK

- Delivered 15+ features and fixes across three major exchange product releases, achieving 100% test pass rate in critical modules through disciplined Agile delivery.
- Led end-to-end migration from Bamboo to Jenkins, modernising CI/CD infrastructure and improving build pipeline reliability and team velocity.
- Worked extensively with AWS, Git, and Linux environments; leveraged shell scripting and system tools for automation and environment management.

London Stock Exchange Group (LSEG)

Graduate Accelerator — Software Engineer Apr 2023 – Jun 2024 | London, UK

- Built a C++ mini exchange prototype (dual gateways + matching engine) — event-driven, real-time, and sensor-analogous in its need for deterministic low-latency data handling.
- Deepened fundamentals in algorithms, data structures, networking, and OS internals as applied to performance-critical systems.

KEY PROJECTS

Induction Heating Oven — CAMSO LOADSTAR | Final Year Project

- Designed and developed an induction heating oven to achieve uniform heat distribution in a tyre mould preheating process for industrial tyre manufacturer CAMSO LOADSTAR.
- Publication IEEE MERCon: doi.org/10.1109/MERCon55799.2022.9906253.

Wearable Thermoelectric Cooling System | 1st Place — IMechE Global Competition

- Designed a wearable vest with an integrated thermoelectric cooling system, engineered to bond to a hazmat suit and maintain safe body temperatures for frontline workers in extreme environments.
- Awarded 1st place globally in the Equal Engineers and IMechE COVID-19 International Engineering Competition.

Industrial Time Study — Unilever Sri Lanka | Tecnomatix Jack Simulation

- Conducted a detailed time and motion study on the handwash pouch production line using Siemens Tecnomatix Jack to simulate human posture and movement through the full production sequence.
- Identified ergonomic risk factors and process bottlenecks, providing actionable recommendations to improve productivity and reduce musculoskeletal injury risk for line operators.

Arduino Smart Blind Stick | IoT & Embedded Hardware-Software Integration

- Designed and fabricated an Arduino-based assistive device integrating ultrasonic object detection, GPS tracking, emergency alert, and device-finding — a complete end-to-end IoT hardware-software project.
- Covered the full embedded development lifecycle: sensor selection, firmware writing, circuit design, and physical enclosure fabrication.

Senior Assist LK (seniorassist.lk) | Full-Stack SaaS Platform

- Independently architected and shipped a full-stack SaaS platform (Next.js 15, TypeScript, Supabase, Stripe) for aged-care service management — demonstrating full-stack software capability as a complement to physical systems.

EDUCATION & CERTIFICATIONS

BSc (Hons) Mechanical Engineering: University of Moratuwa, Sri Lanka — 2017–2022 | Dean's List Award (Semester 7)

Motor Vehicle Technology-02: Ceylon German Technical College, Sri Lanka — 2019–2020

CIMA Certificate Level (UK): Chartered Institute of Management Accountants — 2021

Lean Six Sigma White Belt: Lean Six Sigma Society — 2022

Professional Affiliations: IESL (Institution of Engineers Sri Lanka); IMechE (Institution of Mechanical Engineers)