SUREN KULASEGARAM

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EDUCATION

Bachelor of Engineering in Computer Systems, Co-Op Option   Expected Apr 2026
Carleton University, Ottawa, ON

- **4.0 GPA**, Dean's Honour List
- Relevant Coursework: Algorithms & Data Structures, OO Software Development (Java), Real-Time Concurrent Systems (C++), Operating Systems (Linux/Unix & C), Computer Organization and Architecture, Multivariable Calculus

EXPERIENCE

Software/Test Developer Intern, Nokia, *Ottawa, ON*   May 2025 - Aug 2025

- Owned end-to-end feature validation for two security features on SAR 7705 routers: built test plans, presented reviews, implemented Tcl test procedures, executed regressions, and verified results independently
- Developed **90+** automated sub-tests for TACACS+ access permission and Statistics features, covering multi-protocol access (Telnet, SSH, FTP, Console, SNMP) and TACACS+/RADIUS user VSA, login, authorization, and accounting statistics, improving coverage and closing gaps in legacy suites
- Improved productivity and test scalability by scripting Python automation to register tests across **150+** suites and group runs under compatible testbeds for efficient regression execution

5G Baseband Embedded Software Developer Intern, Ericsson, *Ottawa, ON*   May 2024 - Dec 2024

- Developed features for sub-argument-driven configuration selection and automated YAML test case generation for a Python tool
- Ported and customized a legacy test framework to ensure compatibility, seamless integration, and successful compilation within the new codebase
- Participated in Agile development including stand-ups, code reviews, and software lifecycle, ensuring consistent delivery of high-quality software

Test Automation Software Developer Intern, Nokia, *Ottawa, ON*   Jan 2024 - Apr 2024

- Migrated and redeveloped **13** full-stack test suites for a React web app, ensuring compatibility with the new framework using JavaScript, Node.js, MochaJS, and REST APIs
- Verified successful implementation of proposed bug fixes through thorough manual testing across multiple scenarios and environments

Test Automation Software Developer Intern, Nokia, *Ottawa, ON*   May 2023 - Sept 2023

- Improved Nokia NSP web app reliability by developing and enhancing front-end and back-end test frameworks (JavaScript, Node.js, MochaJS, REST APIs) and resolving **10+** defects through targeted debugging and regression testing.

PROJECTS

Lego Sorting Machine ([Demo](#)) — Python, OpenCV, Flask, React.js, Node.js, SQLite, Firebase, Raspberry Pis

- Architected an automated Lego sorting system integrating computer vision, conveyor mechanics, and dynamic bin sorting to transform a manual process into an efficient, scalable solution.
- Built a full-stack interface that allows real-time configuration, operational control, and live inventory tracking of Lego pieces.

Concurrent Multithreaded Elevator Control System ([Demo](#)) — C++, UDP, Multi-threading

- Designed and implemented a multi threaded elevator control system in C++, managing multiple elevators and floors concurrently with distinct Scheduler, Elevator, and Floor subsystems
- Engineered real-time inter-process communication via UDP sockets, enabling synchronized handling of dynamic ride requests, passenger capacity, and fault scenarios across all elevators

SKILLS

Languages	Python, JavaScript, C/C++, PHP, Java, HTML, CSS, SQL, Assembly, YAML, TCL, Verilog
Tools/Frameworks	Node.js, MochaJS, React.js, Git, Regex, Selenium, OpenStack, Bootstrap, Linux, Jenkins, Flask
Embedded/Hardware	ARM microcontrollers, FPGA, Embedded Linux, UDP, TCP/IP
Soft Skills	Agile, Communication, Time management, Teamwork, Leadership, English, French, Tamil