

SUREN KULASEGARAM

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EDUCATION

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

Expected Graduation: April 2026

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

EXPERIENCE

5G Baseband Software Developer Intern, Ericsson, *Ottawa, ON*

May 2024 - Present

- Developed features to enable sub-argument-driven configuration selection, simplify configuration process, and support to generate multiple testcases for a Python tool that does automated YAML test case generations
- Optimized product code by refactoring complex C/C++ sections flagged by CodeScene and vigorously testing solutions to ensure code quality without breaking the current system
- Played an integral role in fostering an Agile development ecosystem, actively engaging in daily stand-ups and code reviews, resulting in the consistent delivery of high-calibre software products

Software Test Specialist Intern, Nokia, *Ottawa, ON*

Jan 2024 - April 2024

- Enhanced test coverage of web app by migrating **13** test suites by redeveloping and updating test suites to be compatible with newly transitioned React based web app using JavaScript, Node.js and MochaJS
- Verified the successful implementation of bug fixes by conducting thorough manual testing across various scenarios and environments

Software Test Specialist Intern, Nokia, *Ottawa, ON*

May 2023 - Sept 2023

- Contributed to the test automation and regression testing of Nokia's NSP web application using JavaScript, Node.js, and MochaJS
- Enhanced product quality and stability by resolving **10+** product defects identified in regression tests by utilizing debugging techniques and core web principals on the test automation code and web app

PROJECTS

Operating System Scheduler | C, pthreads

- Developed a simplified OS scheduler emulating the Linux Completely Fair Scheduler and a Producer/Consumer model by utilizing C and multi-threading for efficient and concurrent process management
- Minimized priority queue sort time by developing an Insertion Sort leveraging its efficiency with nearly sorted data and small process count on priority queues
- Prevented conflicts and potential deadlocks with concurrently running threads by designing and enforcing thread synchronization protocols utilizing mutexes

Task Management Discord Bot | JavaScript, Node.js, Notion & Discord API

- Developed a Discord bot which helped a peer increase their GPA by **20%** using Discord and Notion APIs to track tasks from a Notion calendar and display them in a user-friendly format on a Discord channel
- Ensured bot responsiveness while handling multiple User and API requests by implementing asynchronous programming (async/await)

Dataset Analyzer | Python

- Led a 4-person team to create an application for analyzing CSV data which realized a **97%** project grade by developing code, coordinating weekly meetings, conducting code reviews, and ensuring deadlines were met
- Developed functions for file operations, data sorting, and searching by utilizing Python and the CSV module

SKILLS

Languages	Python, JavaScript, C/C++, PHP, Java, HTML, CSS, SQL, Assembly, YAML
Tools/Frameworks	Node.js, MochaJS, React.js, Git, Gerrit, Postman, OpenStack, Bootstrap, Linux/Unix, 5G NR
Soft Skills	Agile, Communication, Time management, Teamwork, Leadership, English, French, Tamil