

Samudra Perera

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EDUCATION

University of Waterloo

Master's of Systems Design Engineering
Bachelor's of Civil Engineering

Waterloo, ON

May 2025

May 2021

SKILLS

Programming: JavaScript, TypeScript, Python, C++, C, SQL, HTML, CSS, MATLAB

Libraries/Frameworks: React.js, Node.js, Next.js, Express.js, Redux, Jest, Flask

WORK EXPERIENCE

Software Engineering Intern

Jan 2024 - Apr 2024

Pod

Remote

- Engineered a TypeScript codebase to transition AntD components to MantineUI improving user intuitiveness.
- Refactored codebase reducing lines of code by 20% leading to increased maintainability and performance.
- Configured and implemented Storybook for a custom reusable component library built on Mantine.
- Enhanced scalability by transitioning the backend to Node.js, unifying the entire codebase in JavaScript.

Software Engineering Intern

Jan 2023 – Aug 2023

Spingle.ai

Toronto, ON

- Reconstructed the frontend UI for an integrated AI application, enhancing usability and user intuitiveness.
- Independently developed a React website from concept to launch acquiring 1000+ beta tester sign-ups.
- Worked closely with designers on Figma prototypes to develop a strong and consistent brand identity.

Project Manager

Jan 2022 – Dec 2022

SPH

Toronto, ON

- Spearheaded the overhaul of the material supply chain, eliminating intermediaries and establishing direct partnerships with manufacturers, resulting in over 20% annual savings in material costs.
- Led the digital transformation of company operations by establishing an online footprint, integrating CRM via Jobber, and adopting modern scheduling software improving resource allocation by over 30%.

Building Science Engineer

May 2021 – Dec 2021

WSP

Toronto, ON

- Demonstrated exceptional problem-solving and collaboration skills working in interdisciplinary teams resulting in streamlined workflows and 100% of projects completed within budget and on time.

PROJECTS AND ACHIEVEMENTS

Multithreaded Urban Surveillance Optimization Tool

2024

- Developed a surveillance optimization program, blending Python, C++, and multi-processing for dynamic data and algorithm integration to solve Vertex Cover and shortest path problems using SAT solving.

HawkHacks Winner

2024

- Achieved top recognition among 150+ teams and 900+ participants for the best use case by developing an employment verification platform leveraging smart contracts to check users' work histories and mint a verification token on-chain.

UofT ClimateHacks Winner

2024

- Built a climate forecasting model in Python for Toronto using observed data and global climate models to identify future heat patterns and implemented targeted cooling strategies in high-risk zones.

Spotify Playlist Generator

2024

- Built a Spotify-integrated web app utilizing Agile sprints for feature updates, achieved 100% test coverage, implemented SonarQube for CI, and created a novel shared playlist feature.