

Samudra Perera

✉ spperera@uwaterloo.ca | [🌐 linkedin.com/in/samudraperera](https://www.linkedin.com/in/samudraperera) | [🐙 github.com/samudra-perera](https://github.com/samudra-perera) | ☎ 416-835-8171

EDUCATION

University of Waterloo

Master of Systems Design Engineering
Bachelor of Civil Engineering

Waterloo, ON
2027
2021

WORK EXPERIENCE

Software Developer Intern

Airbus (Skywise)

May 2025 – Present
Waterloo, ON

- Refactored NWS, NOAA, and SADIS polling to fetch only query-specific GRIBs, **cutting weather data transfer from multiple GBs to 30–40 MB**, and replaced a hardcoded implementation with a generalized reusable class.
- Implemented and validated regulatory fare calculation updates for 20+ countries in a C++ flight-planning platform, ensuring accurate enroute charge estimates for commercial flight dispatch operations.
- Built a shared C++ Zip library **adopted across 3 product teams**, standardizing all archive operations into a single centralized class and upgrading to in-memory zip/unzip via libzip.

Software Engineering Intern

Spingle.ai (Return)

May 2024 – Dec 2024
Toronto, ON

One of 3 engineers alongside the founding team; contributions supported a \$2M pre-seed raise.

- Migrated the AI video processing platform from the Gemini API to enterprise Google Cloud Vertex AI, **giving 5 enterprise teams early access to Google's latest LLMs** unavailable on standard non-enterprise plans.
- Prototyped a multimodal video analysis system using Python and Google Gemini, demonstrating LLM-based parsing of video content and semantic retrieval of clips by indexed metadata.
- Redesigned the video analysis cache to use frame hashes rather than file paths, enabling cache sharing across editor environments and reducing redundant LLM inference requests.
- Shipped an over-the-air update system enabling automatic in-app updates with changelogs and notifications, replacing manual downloads and emailed install links for 100% of users going forward.

Software Engineering Intern

Pod

Jan 2024 – Apr 2024
Toronto, ON

- Built Redux state management and REST API integrations to sync Salesforce and third-party CRM data, powering a Kanban-style leads dashboard with real-time data display across the UI.
- Set up Storybook from scratch for the Mantine component library, documenting all component variants and establishing a shared visual reference that all developers contributed to going forward.

Software Engineering Intern

Spingle.ai

Jan 2023 – Aug 2023
Toronto, ON

- Built a Python file-watcher tool that automatically rebuilt and reloaded the app within Adobe Premiere Pro on frontend file changes, eliminating manual rebuild cycles and **saving the team 3+ hours weekly**.
- Deployed a Node.js microservice on GCP that automated log collection and delivery on user feedback and app crashes, **reducing diagnostic time by 80%** and eliminating the need for manual log sharing.
- Designed the company landing page from scratch in React with custom animations and SEO optimization, delivering a fully responsive production site.

PROJECTS

AI-Native Recruitment Platform (ATS)

2026 – Present

- Building an AI-native ATS targeting SMBs with explainable candidate scoring, automated resume parsing, and agentic sourcing — **currently in active development** using React, Flask, FastAPI, PostgreSQL, and the OpenAI API.

Multithreaded Urban Surveillance Optimization Tool

2024

- Developed a multi-processing system using Python for data processing, C++ for shortest path calculations, and SAT for computing the minimum vertex cover for real-world urban networks.

SKILLS

Languages: Python, TypeScript, JavaScript, C++, SQL

Frontend: React, Next.js, HTML, CSS, Zustand, Storybook

Backend: Node.js, Express, Flask, MongoDB, REST APIs

Tools & Cloud: Git, Linux, GCP, AWS, Firebase,