

Rithika Silva

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EDUCATION

University of Waterloo (GPA: 3.86)

Sept. 2021 - May 2026

Candidate for Honours Bachelor of Computer Science

Waterloo, Ontario, Canada

- Minor in Combinatorics & Optimization
- Extracurriculars: Cybersecurity and Privacy Institute, Analytics Group for Games and Sports
- Coursework: Operating Systems, AI, ML, Numerical Methods, Computer Networks, Cryptography, Compilers

TECHNICAL SKILLS

Languages: C++, C, Python, Go, Rust, Java, Bash, HTML/CSS, TypeScript, SQL, R, Racket

Tools & Systems: Git, GitHub Actions, Gitlab CI/CD, Docker, QEMU, Valgrind, CMake, GDB, PostgreSQL

Frameworks & Libraries: Boost, gRPC, Protobuf, GTest, Pytest, OpenCV, PyTorch

EXPERIENCE

System Software Intern | C++, C, Python

May. 2025 – Aug. 2025

NVIDIA

Santa Clara, California, USA

- Developed software on the Data Integrity team within Autonomous Vehicles System Software, focused on ensuring sensor data correctness for downstream deep learning pipelines.
- Led the redesign of the capture architecture for sensor metrics based on software profiling insights, resulting in reduced runtime and memory consumption.

Software Engineering Co-op | C++, C

Sept. 2024 – Oct. 2024

Huawei Technologies Canada Co. Ltd

Markham, Ontario, Canada

- Developed EDA infrastructure and optimized existing features for FPGA Routing Team.
- Requested early end of co-op term due to personal circumstances.

Networking Software Developer Co-op | C++, C, Python

Jan. 2024 – April 2024

Ford Motor Company

Kanata, Ontario, Canada

- Developed software on the Connectivity Team for V2X, focusing on cross-device networking on Linux and QNX.
- Independently developed tooling to filter vehicle diagnostic events to identify key issues for investigation.
- Automated developer workflows, supported defect investigation, and implemented feature requests.

Software Development Co-op | C++, C, Python

May 2023 – Aug. 2023

BlackBerry

Waterloo, Ontario, Canada

- Developed software across two team domains for BlackBerry IVY, an in-vehicle software platform.
- Programmed and maintained end-user example artifacts and enhanced internal CI/CD infrastructure.
- Implemented client-focused tooling features for IVY SDK to streamline workflows and refine user experience.

Software Developer Co-op | Python

Sept. 2022 – Dec. 2022

Arctic Wolf Networks

Waterloo, Ontario, Canada

- Developed software to extract information from company Learning Management System using a REST API for use in company Internal Reporting System.
- Implemented a prototype web interface, delivered complete documentation, and improved runtime by 400%.

PROJECTS

Sports Analytics Infrastructure for Waterloo Warriors | Python, R

Aug. 2024 – Present

- Led development of sports analytics infrastructure used by varsity athletics teams as part of the Data Solutions division under the Waterloo Warriors S-IST.
- Guided a team of 6 to build scraping, ingestion, and access layers using GitHub Actions, Docker, and AWS tooling.
- Designed systems to extract data from external sources, populate internal databases, and serve dashboards for student analysts and coaches.

Lambda Calculus Interpreter | Go

- Features LL(1) parsing, executes using normal order reduction, supports variable renaming to avoid capture, and allows for custom expression shorthand.

README Profile LoL Stats | Python

- GitHub Action to populate a users README Profile with their League of Legends statistics using the Riot API.