

Rithika Silva

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SKILLS SUMMARY

Languages: Python, Go, C++, C, SQL, Bash, Java, HTML/CSS/JavaScript, Racket

Tools/Frameworks: Git, GitHub Actions, Gitlab CI/CD, Docker, QEMU, PostgreSQL, SQLite, Flask, Jinja2, Valgrind, GDB, GTest, Pytest

Operating Systems: Linux, QNX, Windows, MacOS

Soft Skills:

- Design thinking exercised through leadership of community outreach and management of robotics team FRC 1305.
- Extensive teamwork experience through 10+ community extracurricular groups.
- Passion for the growth mindset developed through hobbies and side projects.

PROFESSIONAL EXPERIENCE

BlackBerry, Software Development Student

May 2023 - Aug 2023 | Waterloo, Canada

- Developed software for BlackBerry IVY, an in-vehicle software platform.
- Programmed and maintained sample artifacts using C++.
- Implemented client-focused tooling features using Python, streamlining workflows and refining user experience.
- Enhanced existing CI/CD infrastructure.

Arctic Wolf, Developer-Co-op

Sep 2022 - Dec 2022 | Waterloo, Canada

- Led developing software that extracts information using Python from the company Learning Management System using a REST API to use in the company Internal Reporting System.
- Collaborated with UX/UI developers to implement a proof of concept.
- Engaged with management stakeholders to determine desired use cases and functionality.
- Delivered complete documentation to facilitate integration into their environment.
- Optimized data collection code to improve performance by 400%.

PROJECTS

Obelisk API and Slifer (Go, PostgreSQL, Python, Flask, HTML/CSS):

- Obelisk API: personal RESTful API for task management, personal statistics, and information storage. Incorporates CRUD operations, user-friendly endpoints, and authentication.
- Slifer: mobile-first webapp for task management using Obelisk API.

Nova - The Lambda Calculus Interpreter (Go)

- Lambda calculus interpreter written in Go using only the standard library.
- Uses LL(1) parsing, executes using normal order reduction, supports variable renaming to avoid capture, and custom expression shorthand.

README Profile LoL Stats (Python):

- GitHub Action that populates a users README Profile with their League of Legends statistics using the Riot API.
- Widget is customizable with different skins and choice of statistics to display.

EDUCATION

Candidate for Honours Bachelor of Computer Science - Co-op,

Sep 2021 - Apr 2026 | Waterloo, Canada

University of Waterloo (GPA 3.87)

- **Relevant UW Coursework:** Object-Oriented Programming, Functional Programming, Data Structures & Algorithms, Data Abstraction, Operating Systems, Applied Cryptography

High School Diploma, Chippewa Secondary School (98% Final Average)

Sep 2017 - Jun 2021 | North Bay, Canada

- Co-Valedictorian, Schulich, Loran nominee, Partial IB, SHAD Alum, SHAD Co-Valedictorian, FIRST Robotics Dean's List Semi-Finalist.

EXTRACURRICULARS

- UW Cybersecurity and Privacy Institute student member
- UW Analytics Group for Games and Sports
- UW Compilers Club
- Mentor-At-Large for internationally-competing robotics team FRC 1305