

# Rithika Silva

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## EDUCATION

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- University of Waterloo (GPA: 3.9)** Sept. 2021 - May 2026  
*Candidate for Honours Bachelor of Computer Science, Minor in Combinatorics & Optimization* Waterloo, ON
- Cybersecurity and Privacy Institute Student Member
  - Analytics Group for Games and Sports
  - Coursework: Operating Systems, Applied Cryptography, Compilers, AI/ML, Statistics, Numerical Methods
- Chippewa Secondary School (98%)** Sept. 2017 - June 2021  
*High School Diploma* North Bay, ON
- Co-Valedictorian, Schulich and Loran nominee, IB, SHAD, FIRST Robotics Dean's List nominee

## TECHNICAL SKILLS

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**Languages:** C++, C, Python, Go, Rust, Java, Bash, HTML/CSS, TypeScript, SQL, R, Racket  
**Developer Tools:** Git, GitHub Actions, Gitlab CI/CD, Docker, QEMU, Valgrind, GDB  
**Frameworks and Libraries:** Boost, gRPC/Protobuf, PostgreSQL, SQLite, Flask, GTest, Pytest, NumPy, Pandas  
**Soft Skills:** Design Thinking, Public Speaking, Teamwork, Leadership

## EXPERIENCE

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- Incoming Software Engineering Co-op | C++, C** Sept. 2024 – Dec. 2024  
*Huawei Technologies Canada Co. Ltd* Markham, ON
- Develop EDA infrastructure, program FPGA functionality, and R&D optimized algorithms.
- Networking Software Developer Co-op | C++, C, Python** Jan. 2024 – April 2024  
*Ford Motor Company* Kanata, ON
- Developed software on the Connectivity Team for V2X, focusing on cross-device networking on Linux and QNX.
  - Independently developed tooling that filters global vehicle diagnostic events to enable teams to determine 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, ON
- Developed software across two teams 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, ON
- Spearheaded developing software that extracts information 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 with complete documentation to facilitate integration.
  - Optimized data collection code to improve performance by 400%.

## PROJECTS

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- Obelisk API and Slifer | Go, Python, HTML/CSS, PostgreSQL**
- Obelisk API: personal RESTful API for task management, personal statistics, and information storage. Incorporates CRUD operations, user-friendly endpoints, and key-based authentication.
  - Slifer: mobile-first webapp for task management using Obelisk API.
- 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 to populate a user's README Profile with their League of Legends statistics using the Riot API.
  - Widget is customizable with different skins and choice of statistics to display.