

RISHAD LUTHRA

🏠 rishadluthra.dev ✉ r4luthra@uwaterloo.ca 🌐 [rishadluthra](https://github.com/rishadluthra) 📺 [rishadluthra](https://www.youtube.com/rishadluthra)

Education

University of Waterloo

Expected Graduation August 2025

Bachelor of Computer Science, Co-op, with a Minor in Economics

Waterloo, Canada

- **Relevant Courses:** Algorithms, Computer Networks, Data Structures, Database Systems and Management, Object Oriented Programming, Operating Systems, Software Design and Architecture, User Interfaces

Experience

Sun Life Financial

May 2024 – December 2024

Software Engineering Intern – Secure Web Platform

Toronto, Canada

- Implemented Single Sign-On in **Node.js** and **Express** using Okta APIs, OAuth2.0, and OIDC, reducing manual logins by **67%** across protected company websites.
- Developed **GraphQL APIs** with **JWT authentication** to serve real-time customer data, and integrated **caching** to reduce response times by **90%**.
- Built a dashboard with **React** and **Express**, consolidating numerous communication channels to give customers a comprehensive view of their previous interactions with Sun Life agents.

Software Engineering Intern (Part-time) – Gen AI Platform

September 2024 - December 2024

- Secured an internal AWS Lambda service by implementing **Role Based Access Control** to enforce company wide security policies and compliant usage of the service.

Harvard Medical School – Brigham and Women's Hospital

September 2023 – December 2023

Software Developer and Research Intern

Boston, United States

- Spearheaded the development of a multi-threaded **C++** module for 3DSlicer, enabling real-time 3D surface reconstructions of a patient's anatomy during surgery. This software is currently in use by the surgeon and is undergoing clinical testing to enable wider adoption.
- Developed a **Python** program using **Mediapipe** for hand tracking and implemented **inter-process communication** via **OpenIGTLink** to integrate it with the C++ application, enabling real-time hand tracking in the 3DSlicer module.
- Leveraged **OpenCV** to generate and display real-time depth maps and 3D point clouds, providing surgeons with spatial data for improved control and accuracy during operations.

Mediaocean

January 2022 – April 2022

Software Developer Intern

Toronto, Canada

- Refactored **Python** code by employing the **Model View Controller** design pattern, reducing runtime errors by **40%** for over **100,000** clients worldwide.
- Used **Bash** to automate the developer onboarding process, including environment setup and dependency installation, reducing onboarding time by **40%** and ensuring consistency across new setups.

Projects

Sun Life Elevate Cloud Hackathon (Winner) | AWS, Amazon Q

- **Won** the company-wide Global Elevate Cloud Hackathon by developing scalable **Amazon Q** chatbots using **AWS** and integrating them with Confluence via an iframe. The chatbot was trained on Confluence data and developer documentation obtained through web crawlers.
- Utilized **Retrieval-Augmented Generation (RAG)** and Access Control Lists to ensure secure, role-based responses from Confluence spaces. Enabled users to create Jira and ServiceNow tickets directly, with an estimated average time savings of approximately **\$10,300** per employee per year.

Beacon | Kotlin, Jetpack Compose

- Developed the UI for a marketplace app using **Kotlin** and **Jetpack Compose**, enabling users to seamlessly connect with and offer products and services to those nearby.

Footbolla | React, Java Spring, MySQL

- Developed a soccer analytics web app integrating a **React** frontend, **Java Spring Boot** backend, and **MySQL** database. Implemented Java endpoints for user accounts and logins. Built password encryption using SHA-256 salted hashing.

Technical Skills

Languages: C, C++, Python, Kotlin, R, SQL, Racket, Bash, CSS, HTML, JavaScript

Frameworks/Tools: Node.js, Express.js, React, GraphQL, Apollo Server, Apollo Sandbox, OIDC, OAuth2.0

Developer Tools: Git, GitHub, GitLab, Bitbucket, RStudio, Power BI, Jira, SceneBuilder, AWS Lambda, Amazon Q