RISHAD LUTHRA

Education

University of Waterloo

September 2020 - 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

TriviaLinked February 2025 – Present

Software Engineer (Part-time)

Toronto, Canada

- Developed and refined core features for an iOS trivia game using React Native and Supabase, leading to a 16% increase in daily active users.
- Implemented profile customization and player stats tracking features, boosting user retention to 68%.

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 **AI guardrails** using **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 ${\bf Bash}$ to automate the developer onboarding process, including environment setup and dependency installation, reducing onboarding time by ${\bf 40\%}$ and ensuring consistency across new setups.

Projects

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

- Won the company-wide hackathon by developing Confluence-integrated Amazon Q chatbots using AWS.
- Leveraged 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 an Android app that facilitates real-time connections between users seeking assistance with basic tasks and nearby helpers, featuring a modern UI built with **Kotlin**, **Jetpack Compose**, and **MVVM** architecture.

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, Jira, SceneBuilder, Amazon Q