

Tamim Rahman

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Education

Computer Engineering (B. Eng), Toronto, ON

Cumulative GPA: 3.71/4.33

Ryerson University

Sep 2019 - May 2024

Work Experience

Research Assistant - Developer Intern

Sep 2020 - Aug 2021

Ryerson University - Cybersecurity Research Lab (CRL)

Toronto, ON

- Developed a web interface for the rendered display data returned from the blockchain using ReactJS and ExpressJS.
- Designed and implemented API endpoints to have controlled access to create, read, update data elements.
- Led the R & D of an intuitive visual editor for blockchain workflows. This involved researching and modifying existing open source javascript libraries to be used in combination with the libraries developed by the team.
- Proposed and spearheaded the addition of DevOps tools to the visual editor project. Implemented CI/CD pipelines using a combination of CircleCI, AWS CodeDeploy, AWS EC2 and AWS Amplify.

Research Assistant - Embedded Cryptography

May 2020 - Aug 2020

Ryerson University - Department of Computer Science

Toronto, ON

- Built an implementation of SIKE (post-quantum cryptography) for AVR microcontrollers using aspects of C and C++ in Rust to decrease the time needed for cryptographic key-exchanges.
- Developed a Rust multi-precision arithmetic library which allowed developers to store, perform basic arithmetic, and modular reduction on 400+ bit numbers on 8-bit architecture with significantly lower overhead.
- Wrote **Python** scripts to verify the functionality of the multi-precision library against 100,000+ test cases.

Projects

Android - Pokédex

[Github](#)

Applied aspects of Android development using **Java** to create an app that allows users to search up the type, id, description etc. of the corresponding pokémon. The app has support for all generations and variations of pokémon.

Public Knowledge - RESTful Web Application

[Github](#)

Built a wiki using Django to mimic the basic functionality of Wikipedia. The **Python** web app allows authenticated users to create, update, and delete pages on the wiki and collaborate with fellow peers on articles.

Computer Vision aided Contactless Delivery

[GitHub](#)

Developed a **Python** application that implements OpenCV and the Google Vision to detect when a delivery has been made to a household and notifies the user via email, allowing for truly contactless and efficient deliveries.

Leadership

Software Developer

Apr 2021 - Present

Helium Aero

Toronto, ON

- Responsible for developing an accurate simulation of the MVP and designing the communication protocol between the flight controller and companion computer using a mixture of C++ and **Python** for scripting/implementation.

Executive Lead Developer

Sep 2020 - Present

Ryerson Electrical/Computer Engineering Student Society

Toronto, ON

- Developed a custom discord bot using **Python** to authenticate and automate user roles/permissions for 800+ users on the student union's official discord server for online events/enrichment.
- Created a notification system using **Python** to notify students about events/workshops based on their interests.

Controls Developer

Sep 2019 - Dec 2020

Ryerson Rams Robotics (R3)

Toronto, ON

- Developed a **Python** heat map using Matplotlib and SQLite to visualize radiation data for the Mars rover, resulting in a significant decrease in decision making time for manual operators in the Canadian International Rover Competition.