

# Tamim Rahman

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## Education

**Computer Engineering (B. Eng)**, Toronto, ON

Cumulative GPA: 3.72/4.33

**Toronto Metropolitan University**

Expected May 2024

## Work Experience

### Validation/Automation Engineering Intern

May 2022 - Present

Advanced Micro Devices (AMD)

Toronto, ON

- Led the development of automation scripts for the virtualization validation team. This involved adding coverage for new test cases and migrating old bash scripts to AMD's new python automation frameworks
- Leveraged the functionalities of 3 internal automation frameworks to achieve end-to-end automation for virtualization.
- Accomplished full automation of 30+ test cases resulting in an estimated 67% decrease in time required to execute test cases on Data Centre GPUs in a virtualization environment.
- Provided training sessions and documentation to 20+ members of the team to enable them for automated tests.

### Research Assistant - Developer Intern

Sep 2020 - Aug 2021

Toronto Metropolitan 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 with controlled access to create, read, and 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 conjunction with the modules developed by our team.
- Proposed and implemented CI/CD pipelines using a combination of CircleCI, AWS CodeDeploy, AWS EC2 and AWS Amplify to free up 30% of Development time.

### Research Assistant - Embedded Cryptography

May 2020 - Aug 2020

Toronto Metropolitan University - Department of Computer Science

Toronto, ON

- Implemented SIKE (post-quantum cryptography) for AVR microcontrollers by migrating **C** and **C++** code to Rust to test Rust's viability in the cryptographic key exchanges and cryptography as a whole.
- 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** up to 18 times faster than traditional algorithms.
- Wrote **Python scripts** to verify the functionality of the multi-precision library against **100,000+** operations.

## Projects

### Android App - Pokédex Personal

[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.

### Computer Vision aided Contactless Delivery Personal

[GitHub](#)

Developed a **Python** application that implements OpenCV and 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.

### IoT-based COVID-19 Contact Tracing IEEE 2021 Hackathon Winner

[Github](#)

A platform that leverages NFC technology in smartphones to equip small businesses with Covid-19 contact tracing.

### Optimized Spell-Checker using C Personal

[Github](#)

Applied theory Hash Tables to make an application using **C** to allow users to check the spelling of any plain text file.

### Public Knowledge - Python Web Application Personal

[Github](#)

The app runs on Django and allows authenticated users to create, update, and delete pages on the wiki.

## Extracurricular

**Software Developer** Helium Aero

Apr 2021 - Oct 2021

**Executive Lead Developer** TMU Electrical/Computer Engineering Student Union

Sep 2020 - Aug 2021