Tamim Rahman

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Education

Computer Engineering (B. Eng) - Specialization in Software Engineering   Sep 2019 - May 2023 [Expected]
Ryerson University
GPA: 3.8 / 4.0

Experience

Software Developer Intern Toronto, ON   Sep 2020 - Present
Cybersecurity Research Lab (CRL)
- Developed a prototype web application using the MVC framework Sails.js with Vue.js and MongoDB to show investors the potential of the CRL blockchain network in preventing fraud in the real estate industry and beyond.

Research Assistant – Cryptography Toronto, ON   May 2020 - Aug 2020
Ryerson University - Department of Computer Science
- Created an implementation of SIKE (post-quantum cryptography) for AVR microcontrollers using Rust and the relevant concepts of abstract algebra to decrease the time needed for cryptographic key-exchanges.
- Developed a Rust bignum library which allowed developers to store, perform basic arithmetic, and modular reduction on 400+ bit numbers on 8-bit architecture with significantly lower overhead.
- Researched technical research journals/documentation to adapt and modify the established optimizations of SIKE.

Extracurricular Experience

Lead Developer (Executive) Toronto, ON   Sep 2020 - Present
Ryerson Electrical/Computer Engineering Student Society
- 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 Toronto, ON   Sep 2019 - Aug 2020
Ryerson Rams Robotics (R3)
- Developed a python heat map to visualize radiation data for the Mars rover, resulting in a significant decrease in decision making time for operators in the Canadian International Rover Competition.
- Created an app using python to simulate incoming radiation data coming from the rover's sensors leading to more robust testing of the controls systems and an expected decrease in AI development and training time.

Featured Projects

Computer Vision aided Contactless Delivery   *Github* | *Demo*
Developed a python application that implements features of OpenCV and the Google Vision API to detect when a delivery has been made to a household and notifies the user via email, allowing for truly contactless and efficient deliveries.

Android – Pokédex   *Github* | *Demo*
Applied aspects of android development using Java to create an android 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.

Skills

Proficient: Python, Java, C, Javascript, Vue.js, Django, Rust, SQL, and SQLite.
Competent: C++, Sails.js, Git, object–oriented programming, and Linux.

Certifications

Cisco Certified Network Associate (CCNA)   Aug 2019 - Feb 2023
Certifies the ability to build and deploy networks that are reliable, secure, and scalable.
Earned by displaying in-depth knowledge of networking protocols and best practises.