

Zamin Rizvi

Ottawa, Ontario | 613-415-2423 | zaminrizvi@cmail.carleton.ca
www.zaminrizvi.com | <https://github.com/zamin-r> | www.linkedin.com/in/zamin-rizvi

EDUCATION

Carleton University

Bachelor of Engineering in Software Engineering, CO-OP
Minor in Biology

Ottawa, Ontario

Expected Graduation Date: May 2026
Available for 4-month term in Fall 2024

EXPERIENCE

Wireless Systems Engineer (CO-OP)

Royal Canadian Mounted Police

January - August 2024

Ottawa, ON

- Researched Ethernet, IP/TCP, IEEE 802.11, 802.15.4, Thread, Zigbee, Z-Wave, and LoRa protocols to study the differences, similarities, and OSI model of each protocol for commercial Internet-of-Things (IoT) devices
- Used COTS packet sniffing hardware alongside Wireshark to dissect IoT device packet information, what protocols they utilize for certain information, security and encryption standards, and frequency of packet transmission
- Studied star, tree, and mesh network topologies to see the efficiency of each protocol across different configurations
- Tested protocol stability, device behaviour, and device security through a combination of packet injection and manipulation software, Faraday cages, 2.4-GHz and sub 1-GHz transceivers, and Software Defined Radios (SDR's)
- Used Python and PostgreSQL to develop a custom portable Wireless Intrusion Detection System (WIDS) solution capable of reporting Wi-Fi network intrusions detected across multiple access points and its connected devices
- Tested the WIDS solution with tools such as Aircrack-ng to ensure network intrusions were captured and accurately reported to the users through SMS, a web GUI interface, and email via SMTP servers
- Studied GNSS protocols and GPS simulators to learn their communication, how they process data, and the use-cases
- Developed professional social skills through being a main point of communication regarding project information with contractors, by demonstrating project material to clients, and by collaborating closely with coworkers
- Maintained responsibility for multiple steps of the projects, such as researching, coding, testing, and demonstrating
- Wrote detailed documentation for all project related code and research

Software Developer Intern

Funnelll

October - December 2022

Delaware, USA (Remote)

- Developed a multi page UTM (Urchin Tracking Module) lead magnet builder application that is capable of adding UTM parameters to a user inputted link
- Used HTML/CSS Bootstrap 5 framework and JavaScript to develop the UI and display UTM parameters
- Designed such that the user can make multiple UTM links which are displayed at the end, the links are attached to JavaScript cookies so that they last for a 24 hour time period
- Worked alongside my supervisor who provided feedback depending on what customers required

PROJECTS

Personal Portfolio Website

May - August 2022

- Utilized HTML, CSS, JavaScript, React.js and Next.js to create a mobile friendly website designed to showcase my projects and information about who I am
- AWS technologies (Route 53, Amazon S3, Certificate Manager, CloudFront) are used for hosting and management
- React.js maps and keys are used for adding new project entries to the Project tab seamlessly

SKILLS

Programming Languages/Frameworks

Python, C, Java, JavaScript, HTML/CSS, Bootstrap 5, React.js, Next.js, Flask, PostgreSQL

Developer Tools/Technologies

Unix, Kali Linux, Git, Bitbucket, VS Code, Webstorm, IntelliJ, PyCharm, AWS, Docker, Wireshark, VMWare, SDCC compiler

Communication Languages

English: Fluent, written and spoken
Urdu: Fluent, spoken