Viransh Shah

Computer Science Student (Level 3)
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Highlights of Qualifications

- Seeking co-op position starting May 2026 for 4, 8, 12, or 16 months.
- Strong analytical, attention to detail, and problem-solving skills developed through computer science and math courses.
- Demonstrated excellent teamwork, time management, and communication skills through collaboration with the McMaster Competitive Programming Club and participation in various CTF events.

Education

McMaster University (Level 3) Expected May 2025
Bachelor of Applied Science in Computer Science *Hamilton, Ontario*

- Dean's Honours List: Maintained a GPA of 3.5 or higher (GPA: 3.7 / 4.0)
- **Databases (A+)**: Focus on ER Diagrams, SQL queries, Relational Data Models, Dependency Theory, and Deadlocks for transactions.
- **Data Structures and Algorithms (A+)**: Covered various data structures (e.g., Stack, Queues, Graphs) and algorithms (e.g., sorting, hashing).

Experience

McMaster University Jan 2024 – Apr 2024
Teaching Assistant - Data Structures & Algorithms *Hamilton, Ontario*

- Led interactive tutorial sessions to reinforce and expand upon concepts covered in lectures, fostering a deeper understanding of data structures and algorithms among students.
- Conducted thorough and consistent evaluations of student assignments, midterm, and final exam in adherence to provided grading rubrics.
- Maintained a commitment to providing timely and constructive feedback to students, helping them understand key concepts and improve their skills.

McMaster Competitive Programming Club Member Sept 2023 – Present
CyberSci Team Member *Hamilton, Ontario*

- Participated in CTFs with the McMaster Competitive Programming Club and CyberSci team, utilizing tools like Kali Linux, Nmap, Metasploit, and Wireshark to solve challenges in cybersecurity, cryptography, threat hunting, reverse engineering, malware analysis, and network traffic analysis.
- Developed skills in incident response, log analysis, password cracking, binary exploitation, and attack chain analysis, incorporating lessons from Advent of Cyber 2023 and 2024.

Environment and Climate Change Canada Sept 2024 – Present
Scientific Support Technician (Full Stack Developer) - IMWEBs Viewer Project *Burlington, Ontario*

- Independently developed the IMWEBs Viewer, a cross-platform desktop application designed for visualizing and analyzing watershed data.
- Implemented the frontend using Vue.js, developed backend services in Python with Flask to handle REST API requests for data processing, database queries, and statistical analysis.
- Used Tauri to package the application as a standalone executable, enabling users to run the application on Windows, macOS, and Linux without requiring a web browser.
- Authored comprehensive technical documentation, including methodologies, development tools, and step-by-step guides for implementing key features.

Technical Skills

Languages: Vue, React, HTML, CSS, JavaScript, Python, Haskell, C, Java, Bash, SQL, LaTeX, R, SAS, Prolog
Technologies: Electron, Tauri, VirtualBox, Google Cloud Storage/APIs Usage/VM, SQLite, Tailwind CSS, Astro, Flask, GNU/Linux
Concepts: Operating Systems, Virtual Memory, Database Normalization, Web Exploitation, Cryptography, Reverse Engineering, Forensics, OSINT, Binary Exploitation, Threat Hunting, Malware Analysis, Incident Response, Log Analysis, Secure Coding, Privilege Escalation, Password Cracking, Network Traffic Analysis, Attack Chain Analysis, Defensive Security, Security Operations Center (SOC) Practices, Threat Intelligence