Mohamed Elsaban

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Education

Carleton University Ottawa, ON

Bachelor of Computer Science Co-op (Cybersecurity) *Sep 2023 – Apr 2028*

- President's Scholarship.

Relevant Coursework: Programming in Python, Programming in Java (OOP), Systems Programming, Web Applications, Cryptography, Symbolic Logic, Data Structures, Discrete Math, Software Engineering

Experience

Risk Management Coordinator Oct 2024 – Present

Office of Risk Management, Carleton University *Ottawa, ON*

- Collaborated with **cybersecurity leadership** to interpret frameworks and streamline notification processes, fostering a stronger incident response strategy.
- **Developed cybersecurity incident notification guidelines** by conducting in-depth research and utilizing propositional logic to align official reports with Carleton University's unique environment.
- Proactively engaged with the Computer Security Division at the **National Institute of Standards and Technology** (NIST) to gather insights on frameworks, ensuring alignment with industry best practices and tailoring solutions to organizational needs.
- Leveraged **targeted investigations** using OSINT Framework to gather specific information, supporting decision-making and enhancing notification methods.
- **Handled sensitive data** with discretion and professionalism while supporting risk management initiatives.

Communications Security Engineer Jan 2024 – Present

CU On Orbit (Satellite Design Team) *Ottawa, ON*

- Collaborated with a 30-person multidisciplinary team in a Concurrent Design Facility (CDF).
- Prepared a CDF report on encryption strategies meeting government compliance.
- Researched RSA digital signatures for secure satellite-ground communication.
- Performed ethical LoRa signal interception simulations using SDR to identify vulnerabilities.

Contract Web Developer Apr 2024 – Jul 2024

Second Wave Boutique *Kincardine, ON*

- **Designed and developed** a boutique-style fashion store website using HTML, CSS, and JavaScript, delivering a clean and visually appealing user experience tailored to the client's brand.
- Collaborated through **pair programming** to ensure seamless implementation of design and functionality.
- Optimized the website for **search engines (SEO)**, resulting in a **30%** increase in organic traffic and significantly enhancing the boutique's online presence.
- **Maintained and updated** the website post-launch, implementing client-requested changes to services and ensuring the site remained up-to-date and functional.

Projects

Offline Post-Breach Password Cracking Simulation (Ethical) Winter 2025

Self-Directed Cybersecurity Project

- Conducted an ethical offline password audit, simulating a realistic post-breach attacker scenario over two months.
- Acquired real-world bcrypt hashes using **DeHashed**, leveraging OSINT and publicly available breach data.
- Cracked bcrypt hashes via dictionary attacks using **Hashcat** and **cupp**, optimizing wordlists for efficiency.
- Explored GPU acceleration, password entropy considerations, and practical limitations of password hashing.

Technical Skills

Languages: Python, Java, JavaScript, C/C++, HTML, CSS
Technologies: Node.js, Express.js, Flask, AWS Basics
Developer Tools: Git, Docker, MySQL, VS Code, IntelliJ
Cybersecurity & Intelligence Tools: OSINT Framework, theHarvester, Shodan, Hashcat, John the Ripper, Wireshark, Nmap, Burp Suite, Metasploit Framework, Kali Linux