Mazen Alhassan

+1 (613) 294-4133 | mazen.alhassann@gmail.com | linkedin.com/in/mazen-alhassan3489 | github.com/Mazen-Alhassan

EDUCATION

Carleton University, B.I.T in Information Technology, GPA: 3.8 / 4.0   Expected Graduation: April *2027*
Relevant Coursework: Data Structures & Algorithms, Advanced Network Routing, Network Security, Database Concepts & SQL
Member: Bachelor of Information Technology Society (BITsoc), Carleton Cybersecurity Club, ColorStack

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, TypeScript, SQL, PowerShell, HTML/CSS, C, C++, PHP, Bash, MATLAB
Frameworks & Tools: React.js, Next.js, Flask, Django, XCode, Express.js, NetworkX, Pandas, Kubernetes, Jenkins, Git, Azure
Skills: Artificial Intelligence, Generative AI, LLM, Prompt Engineering, Computer Vision, AI Product Strategy

WORK EXPERIENCES

Université Laval   **Quebec City, On**
Research Intern | NetworkX, Matplotlib, Database modeling, MITRE ATT&CK framework   *Jun 2025 – Present*
- Built a MITRE ATT&CK–driven attack-flow generator in Python (NetworkX, Matplotlib), modeling databases and web apps.
- Combined separate paths into one capability-tagged graph, making it easier to see how attackers could pivot mid-flow.
- Built a Python-based risk model using MITRE ATT&CK metadata to score nodes, rank critical attack paths, & guide remediation.
- Reviewed 25+ cybersecurity papers to find gaps in attack modeling, presenting to 5 researchers and contributing to 2 public drafts.

Carleton University   **Ottawa, On**
IT Support Consultant | TeamViewer, Microsoft Remote Desktop, BitLocker, FileVault, Active Directory   *Sept 2024 – Apr 2025*
- Resolved 150+ hardware/software tickets for faculty, staff, and students across Windows 10/11 and macOS using remote tools.
- Provisioned and secured 200+ devices with BitLocker (Windows) and FileVault (macOS); and in turn enforced role-based access.
- Performed account administration (on/off-boarding, group membership, password resets) and wrote user-facing how-tos.
- Set up and relocated computer equipment for classrooms and offices, ensuring smooth transitions with minimal downtime.

Locvm   **Ottawa, ON**
Full Stack Dev / QA Tester Intern | GitHub Actions, CI/CD pipelines, RESTful APIs, SQL   *Mar 2025 – May 2025*
- Delivered 95% regression prevention and zero production bugs by designing 50+ automated test cases in a Next.js framework.
- Cut QA overhead 60% and sped deployments from 2 weeks to 3 days by writing 20+ tests / automating CI with GitHub Actions.
- Improved system reliability 40% and cut detection time from 4h to 30m by resolving 15+ issues and adding testing/monitoring.
- Enhanced API performance optimizing SQL queries / refining RESTful endpoints, reducing average response time from 500ms to 350ms.

PROJECTS

MITRE ATT&CK Flow Generator | Python, NetworkX, Matplotlib, PowerShell, Microsoft Sentinel   Jun 2025 – Present
- Developed a Python-based MITRE ATT&CK flow generator encompassing 150+ techniques across 4 major security domains.
- Engineered 25+ attack paths with comprehensive modular architecture supporting database and web application threats.
- Automated professional-grade security documentation as measured by 300 DPI visualizations and machine-readable JSON exports by creating interactive CLI with customizable layouts, color-coded attack flows, and MITRE technique ID mappings.

Implementation of SOC and Honeynet In Azure | Microsoft Azure, Microsoft Sentinel, PowerShell, SIEM   *July 2025*
- Deployed a threat detection system with automated RDP alerts via Microsoft Sentinel, custom workbooks, and a live dashboard.
- Built enterprise security operations with real-time telemetry from 50+ sites using Azure Log Analytics and custom queries.
- Improved system reliability 40% by resolving 15+ issues, adding monitoring, cutting detection time from 4 hours to 30 minutes.

Sports Analytics Platform | Python, SQLite, SMTP, NumPy, REST APIs, Statistical Modeling   *May 2025*
- **Built full-stack sports analytics platform** as measured by **real-time data from 6+ sports leagues and automated notifications** by developing Flask web application with multi-API integration, SQLite database, and Twilio SMS alerts for live odds tracking.

LEADERSHIP

ColorStack   **Remote**
Member   *Apr 2025 – Present*
- Actively engage in community channels focused on tech career advancement and professional development opportunities.

Carleton Cybersecurity Club   **Ottawa, ON**
Member   *Sep 2023 – Present*
- Attend cybersecurity workshops and threat analysis discussions to enhance security knowledge and practical skills.