



# ORION NELSON

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## EDUCATION

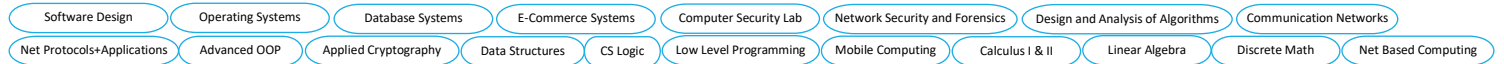
### BSc, Specialized Honours Computer Security

York University

Sep 2018 – Sep 2022

Toronto, Ontario

- Member of **Lassonde Security Club**, and participated in various school events **Lassonde Engineering Challenge** and **Hack the North**.
- Volunteered as **Frosh Leader (Creative Team) Week 0**, introducing new students to campus with remote and in person events.



## PROFESSIONAL EXPERIENCES

### Assistant Coordinator

Sherlock Research Team

Sep 2022 – Present

Toronto, Ontario

- Address project needs and **Proposing Positions** and next steps on familiar components in collaboration with coordinator.
- Conduct Interview's** of the incoming students assessing their interests and assigning appropriate roles based on their abilities.
- Assist in the creation of **Contract Drafts**, in conjunction with the project coordinator.

### Research Assistant

Sherlock Research Team

Sep 2021 – Sep 2022

Toronto, Ontario

- Provide security input to projects and developing **automation** solutions while using an **agile** methodology for development and deployments.
- Worked with **GitLab, Docker, Redis** and **Django** on full stack **Python** web application.
- Developed an **autonomous web crawler** with **spam detection** and **multithreaded** support for the **dark web**.
- Integrated **TFIDF search engine** and **crawler** into prototype application.
- Gave **presentations** on **progress** to team and **collaborated** with other researchers.

### Software Developer (Security Specialist + System Engineer)

Allenfort Software Solutions

Aug 2021 – July 2022

Remote

- Set up **nginx server, registered domain** and set up **authentication** based on company needs.
- Established internal **certificates, mail server (Dovecot, Postfix)** and **contact form**.
- Established company-wide security **best practices/standards**, documented procedures, and protocols to **mitigate risk** of data breach.
- Made security centric **CI/CD** pipeline integrating **Snyk, Veracode** and various other **SAST, SCA and DAST** workflows.
- Gave **security insight** and played devils advocate at **product development** meetings.

## COURSES

## LANGUAGES

## INTERESTS

Applied Cryptography

Java

Information Technology/Security

Network Protocols (TCP/IP)

JavaScript

Data Analysis

Data Structures and Database Systems

Python

Project Management

Design and Analysis of Algorithms

C

Cloud Security

Electronic Commerce Systems

PHP

Developer Operations

## PROJECTS

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### Shop Unicorn

Front End

Feb 2022

Team

- Worked with team on **Styled Components**, **Material UI**, **Axios** and **React Router Dom**.
- Designed vendor and client **control panel**, **registration**, **rating system**, **comment section** and **login components**.
- Implemented automated **CI/CD** deployment with **Vercel** and **CodeQL** with developer **Discord** integration.

### Drivers Licence Extractor

Security, OpenCV

Mar 2022

Individual

- Extracts information from the **PDF417 barcode** of an **drivers licence** with just a photo of the back.

### Help Desk Support App

Security, JWT, Sockets

Feb 2022

Team

- Worked with team on development, **security testing** and **analytics** of a **socket** -based application.
- Application allowed for **authenticated** help desk employees **non authenticated** clients

### TensorFlow Jukebox

Research, OpenCV, Speech Recognition

Aug 2021

Individual

- Researched and investigated the areas of **accent**, **voice**, **age**, race recognition with **voice activation detection** with **machine learning models**.

### RGB Mouse Plugin

JavaScript, Wireshark

Dec 2021

Individual

- Reverse engineered **HID protocols** and start sequences with **Wireshark** implementing **RGB control** for **HID devices**.

### Web Request and Selenium Projects

Python, Bat, BeautifulSoup, Requests, Selenium

2020 ~ 2022

Individual

- Implemented a custom Google **search** API to return **link results** given a query.
- Created API for calling **GPT-J-6B** and **abstractive predictions** of **text** copied from and to the **clipboard**.
- Developed **job application bot** with **selenium** for logging into job application sites and **parsing listings** based on **skillset**.
- Created **show notification bot** to alert the user of **web series released** and **download** them concurrently with **multiprocessing**.

## CYBERSECURITY CLASSES

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### Computer Security Lab

Black Hat

Winter – 2022

University

- Dealt with operating systems, network, password-based, and application-layer attacks, network traffic tools, **penetration testing** tools.
- Learned how to build a virus, Trojan, worm, (how to detect them and break them).

### Network Security and Forensics

White Hat

Winter – 2022

University

- Learned about Virtual Private Networks (VPNs), IPSec, Secure Socket Layer (SSL) / Transport Layer Security (TLS), HTTPS / Digital Certificates, Internet Packet Crafting, Network Scanning & Analysis Tools.
- Worked with Firewalls, Intrusion Detection Systems (IDSs), Wi-Fi, Cloud Security, Network Forensics Investigation Methodology and Tools.
- Completed **NDG labs** in both **ethical hacking** and **Security +**.
- Conducted **APT threat analysis** assignments and **presentations**.