

## Skills Summary

- *Languages, Libraries, & Frameworks:* C, Python, JavaScript, C++, PowerShell, Bash, React, React Native, pandas, Django, Node.js
- *Databases, Tools, & Cloud-Based Technologies:* MongoDB, PostgreSQL, Cassandra, Kibana, Elastic, AWS Lambda
- Experienced with information security, RESTful APIs, automation, web/mobile applications, and working in an agile environment
- Passionate for solving problems through simple and elegant solutions, securing systems, and enablement of technology

## Work Experience

### Arctic Wolf Networks

Waterloo, ON

Software Developer Intern (Security)

January – April 2022

- Lead and implemented complex security tasks for **3 new detections** involving suspicious file download methods, running dynamic link libraries with export functions, and adding/modifying file exceptions to Windows Defender
- Researched and created multiple breach and attack simulations for file patterns found in **over 10** common major ransomware encryptors
- Investigated and dropped **over 800 million** benign daily event logs from sensors to help reduce cost and server load (**highest on team**)
- Owned a weekly assignment to synchronize open-sourced Sigma rules with an internal repo and informed team on important detections
- *Utilized:* Python, PowerShell Scripting, EDR / SIEM detections (Windows), Sigma rules, MITRE ATT&CK, AttackIQ, Kibana, Elastic

### OpenText Corporation

Waterloo, ON

Software Developer Intern (Backend)

May – August 2021

- Devised and executed software designs and solutions to support a cloud-based file sharing and collaboration platform
- Analyzed and applied Microsoft WOPI Protocol to help make contributions to Microsoft Office Online integrations within products
- Improved product security by reducing SonarQube code smells and by completing OWASP training
- *Utilized:* JavaScript, Node.js, AngularJS, Redis, Mocha Chai, Sinon.js, PostgreSQL, Docker, Cassandra, RESTful APIs

### Seismic Software

Toronto, ON

Software Developer Intern (Full Stack)

September – December 2020

- Implemented all aspects of software design to support a web and mobile content engagement platform
- Contributed to reducing latency of client displayed reports **by 90%** and contributed to data migration preparations to Gainsight
- *Utilized:* TypeScript, React, Node.js, MongoDB, Selenium, AngularJS, Ionic, HTML5, CSS3, RESTful APIs

### Economical Insurance

Kitchener, ON

Software Developer Intern

January – April 2020

- Developed impactful ServiceNow solutions for end business users and initiated the use of automated tests to improve coverage
- *Utilized:* JavaScript, Jasmine, ServiceNow

## Projects

### SigmaHQ Open-Source Repo

March 2022 – present

- Debugged Sigma rules causing build issues and researched for new security detections using articles and MITRE ATT&CK techniques

### AES Image Encryptor

September 2022

- Utilized Crypto library in Python to construct an image encryptor using AES in cipher-block chaining mode with padding
- Implemented to understand and learn better ways of protecting image data

### Windows Keylogger

August 2022

- Researched Windows API, the GetAsyncKeyState function, and Virtual-Key codes to construct a keyboard capturing tool in C
- Uses Windows API to hide the console and capture keyboard strokes into a log file

### Real-Time Operating System

May – August 2022

- Designed for Keil MCB1700 board populated with an NXP LPC1768 microcontroller for a group lab, as the **majority contributor**
- Implemented memory and thread management, inter-thread communication, console I/O, and real-time EDF scheduling in C

### Google Trends Twitter bots

August – September 2021

- Launched Google Trends Twitter bots by creatively parsing routes through Postman due to no publicly available API documentation
- *Utilized:* JavaScript, cURL, Postman, Node.js, Serverless, AWS Lambda

### UFO Sightings Web Crawler & Dataset

July – August 2021

- Automated via parsing script to compile data on **over 130 000** UFO sightings dating back to June 1400s into published CSV and Excel files
- *Utilized:* Python (pandas), Selenium, Chromedriver, published as a dataset on data.world

See more projects at [github.com/d36mehta](https://github.com/d36mehta), <https://linktr.ee/drastimehta>, and [drastimehta.pythonanywhere.com](https://drastimehta.pythonanywhere.com)

## Education

### University of Waterloo

Waterloo, ON

Bachelor of Applied Science: Honours Computer Engineering

September 2019 – present

Data Structures & Algorithms, Systems Programming & Concurrency, Operating Systems, Database Systems, Computer Architecture, Computer Networks, Search Engines