

Personal Info

seanptmaher@gmail.com
seanptmaher.com
(613)-794-9322
github.com/seanptmaher

Education

Hons. BSc Computer
Science, Hons. BSc Math
(Data Science)
University of Ottawa

Languages

C, Common Lisp, Python,
x86-64 assembly, C++,
Java, bash

Tools I use

git, emacs,
unix text processing tools,
radare2, Splunk, Elastic,

Natural Languages

English, French

Interests

Currently singing with the
Capital Chamber Choir
(capitalchamberchoir.ca)
9th grade RCM Voice,
over 9 years of singing in
choirs,
over 13 years of music

Experience

Google SWE Intern (Summer 2020)

- Worked on the WebAssembly Standards team to port ARM Neon SIMD code to Wasm using a header-swap library in portable C
- Contributed over 50 classes of intrinsic, each comprising 5-20 intrinsic functions, for a total of over 70k LoC and 52 merged PRs
- Built a disassembler into radare2 for Wasm SIMD instructions

Bank of Canada Cyber Security (Summer 2019)

- Worked with a team of 5 analysts to monitor the Bank of Canada.
- Developed an application from the ground up in Python and VB to analyze email and automate tedious parts of the team's workflow
- Collaborated to build detections in Splunk for various TTPs, notably privilege escalation, lateral movement, and defense evasion

Projects

Bloatcheck (WIP) | Common Lisp, distributed systems

End goal: a browser extension to show the approx quantity of JS that will load on a website in a search engine from the ground up

Current progress: Built a distributed web-crawler, built a structured data serialization protocol, designed a secure communication protocol built on said serialization protocol, designed an authentication system (similar to Kerberos), and designed an architecture for the finalized backend.

discfs | Common Lisp, Discord

A content-addressable filesystem, implemented with Discord messages as its backend

Text Editor (Sug) | C, font rendering, graphics pipeline

A handmade graphical text editor for X11

Implemented font parsing and rendering from scratch

spkr | Python, Flask, Hackathon

A small web-app written in Python with flask which allows users to login with their Spotify account, and will curate a playlist to cater to each user

Regular Expression Parser | C, simple compiler internals

Implemented recursive descent parser and interpreter for regex

Flow (Won MLH Local Hack Day) | Python, Bash [in team of 3]

Used a RasPi to monitor density of people via network traffic

Developed website and Android app to display said data

Malware Reverse Engineering | C, Asm, OS Components

Know x86-64 assembly, operating system internals, and built crackmes.