Paul Lee

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SKILLS

Languages: *Python, Java, C, C++, JavaScript, TypeScript, HTML, CSS, Bash, SQL*
Technologies: *Linux, Docker, Kubernetes, Django, Flask, PostgreSQL, React, Next.js, Node.js, TailwindCSS, Nginx, S3, Git*
Skills: *Full-stack Web Development, Sysadmin, Web Security, Linux Hardening*

EXPERIENCES

Founding Lead Backend Developer
Toronto, ON

Project Metropolis — *Aug 2021 − Jun 2022*

- Led the development of a web directory for school timetables, announcements, and club directory
- Enabled students to upload their personal timetables and view their daily schedule and classes in real-time
- Used by teachers and **70+ clubs** to post announcements and events to **1000+ students**
- **Technologies Used:** *Django, PostgreSQL, PWA, Caddy, Docker, Linux, GitHub Actions*

Computer Programming Club Lead Sysadmin
Toronto, ON

Mackenzie Computer Programming Team — *Oct 2020 − Jun 2023*

- Maintained the school computer club's website and its online competitive programming grader
- Taught cybersecurity lessons to **15+ students** and authored various educational cybersecurity challenges
- Initiated and hosted an annual international cybersecurity contest with **400+ participants**
- **Technologies Used:** *Django, MySQL, Nginx, Supervisord, Wireguard, Git, Linux*

PROJECTS

mCTF: Cybersecurity Contest Platform | *GitHub* | *Demo*
Feb 2022

- Built a cybersecurity competition platform using *Django* and *Kubernetes* for Jeopardy-style CTF challenges
- Implemented on-demand ephemeral challenge instances for each team to exploit using Kubernetes.
- **Technologies Used:** *Django, PostgreSQL, Docker, Kubernetes, K3s, Traefik Ingress, Nebula, Linux*

Toronto Public Library O'Reilly Web Extension | *GitHub*
Jul 2022

- Prevented frequent session expiry on O'Reilly Learning Platform when accessed through Toronto Public Library
- **Technologies Used:** *TypeScript, Parcel, Node.js, Chrome Extension API*

pAIge: Automated Portfolio Site Generator | *Devpost*
Aug 2023

- Scraped information from users' LinkedIn profiles and auto-generated a personal portfolio site from a template
- Deployed portfolio sites automatically on a subdomain using virtual hosting with instant TLS
- **Technologies Used:** *Django, SQLite3, Bootstrap, Caddy, Linux*

Scraterpreter: Headless Scratch Interpreter | *GitHub*
May 2020

- Wrote a headless interpreter in *C++* that runs Scratch programs without graphics in the terminal
- Currently used by 200+ users worldwide from 50+ countries
- **Technologies Used:** *C++, CMake, Snapcraft, Flatpak, Linux*

AWARDS & ACHIEVEMENTS

Carnegie Mellon University picoCTF Cybersecurity Competition
Apr 2022

3rd *place internationally and* 1st *place in Canada out of 7794 teams and 18000+ students*

- Solved web exploitation challenges involving *SQLi, XSS, CSRF*, etc.

CyberTitan Cybersecurity Competition
May 2023

1st *place in Canada out of 90 teams in Canada*

- Secured multiple *Debian Linux* servers against attacks and vulnerabilities

EDUCATION

University of Waterloo
Waterloo, ON

Bachelor of Software Engineering — *Sep 2023 − Apr 2028*