

# Jason Cameron

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## EXPERIENCES

### Research Assistant

Jun. 2024 - Present

*Lassonde School of Engineering, York University*

*North York, ON*

- Increased participation in a pilot mentorship program by 15% through a targeted research and intervention framework
- Identified key EDI barriers in computing via mixed-methods analysis, yielding a 25% improved sentiment

### Lead Backend Developer

Sep. 2022 - Present

*Project Metropolis*

*Toronto, ON*

- Optimized Docker build processes reducing average build time from **140s** to **80s** by caching reused layers
- Automated API documentation generation conforming to OpenAPI 3.1 standards, saving **5** hours monthly per developer
- Streamlined deployment via centralized bash scripts, improving system agility and reducing average downtime by **12%**
- Established REST API filters, eliminating wasted API calls by **~30%** and decreasing server load by **3%** during peak usage
- Designed and implemented polymorphic comments, likes, view counts, and saves, increasing user engagement by **300%**

### Computer Science Tutor

Dec. 2023 - Present

- Instructed students aged 7-16 in Scratch, Python and basic web development through one-on-one and *Toronto, ON* group lessons. Utilized a blend of interactive exercises and project-based learning to foster understanding

## PROJECTS

[jasoncameron.dev/#/projects](https://jasoncameron.dev/#/projects)

### RedditVideoMakerBot | Python, Reddit, FFmpeg, AWS Polly, Playwright, Web Scraping — 🔄

May 2022 - Present

Automated tool for transforming Reddit posts into videos using code, streamlining traditional editing workflows

- Created a simplified configuration GUI, growing the bot to **6,300+** stars on GitHub and **100,000+** downloads
- Enhanced bot's Text-to-Speech (TTS) functionality by reverse engineering the TikTok TTS API, resulting in a **30%** reduction in processing time and a **25%** increase in speech clarity
- Ensured reliable operation of the bot across **10,000+** machines and all major operating systems despite API changes, rate limiting, and copyright issues

### Abacus | Golang, Gin, Valkey, Docker, Jsoniter, SSE, JSONP, Linux System Administration — 🔄

Apr. 2024 - Present

High-performing and lightweight API simplifying numeric tracking and analytics, eliminating custom backend infrastructure

- Scaled the site up to **1.5 million+** requests weekly while maintaining a **100% uptime** and **47.0ms** median response time
- Reduced infrastructure costs by **35%** and increased speeds by **22%** utilizing pipelining and optimizing Docker networks

### Foodle | Typescript, Svelte, CSS, Python, Flask, Cloudflare, Google Analytics — 🔄

Aug. 2022 - Present

A food-themed twist of Wordle with an additional set of modes and features

- Developed and deployed a high-performance Wordle-inspired game using Svelte, Cloudflare, and GitHub Pages. Grew it to **680,000+** unique visitors and **5,700,000+** page views via user-driven improvements

### mCTF | Django, K8s, K3s, Docker, Valkey, PostgreSQL, Nebula — 🔄

Jan. 2024 - Present

A Reusable Jeopardy-style CTF platform written using Django and Kubernetes

- Identified and rewrote critical SQL query reducing time to execute by over **80x** to **97ms** by leveraging precalculated database tables, leading to an over **50x** reduction in avg request time and an overall **60%** increase in user satisfaction

### Scavenger Hunt | Python, Django, CSS, JS, PKCE2, OAuth 2.0 — 🔄

Nov 2022-Present

- Developed a Django-based scavenger hunt platform with anti-cheat/teaming systems and support for multiple concurrent hunts to ensure fair and strategic gameplay

## FORMAL EDUCATION

### William Lyon Mackenzie Collegiate Institute - Toronto, Ontario

- Extracurriculars:** Student Council (Tech Rep), Competitive Programming Club (*System Administrator*), Engineering Club (*Tech Lead*), School Newspaper (*Photographer*), A/V Team (*Crew Member / Club Liaison*)

## SKILLS

**Languages:** Python, Golang, Java, JavaScript/Typescript, Bash, Nim, Processing, HTML, CSS/SCSS

**DevOps Tools:** Linux, Caddy, Nginx, træfik, Docker (Swarm, Compose, BuildX), Cloudflare, WireGuard, GitHub Actions

**Tools/Frameworks:** Django, FastAPI, Flask, React, Svelte, Gin, Celery, Postman, Tailscale, Git

**Databases:** PostgreSQL, SQLite, RocksDB, Valkey, Redis, MongoDB

**Productivity and Design Tools:** Miro, Notion, Microsoft Suite, Canva, Photoshop, LaTeX