

# JOSHUA MACHADO

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## EDUCATION

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### University of Victoria

Bachelor of Science in Computer Science

- GPA: 3.8/4.0

Victoria, BC

Sep 2020 – Dec 2024

## EXPERIENCE

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### Software Engineer Intern

May 2023 – Aug 2023

Tradable Bits

Vancouver, BC

- Improved integration development efficiency by 70%, as measured by reduced development time, by refactoring 40 integration scripts and eliminating 2,500 lines of redundant code
- Increased user engagement and higher Click Through Rates for sponsors by leveraging WebSockets to deliver real-time link previews in the Maple Leafs Sports & Entertainment livestream chat
- Enhanced operational efficiency and increased functionality in partner integrations by adjusting PostgreSQL database structures, introducing new triggers, and improving overall system flexibility
- Leveraged HTTP protocol and REST API strategies to strengthen the platform. Optimized data processing efficiency and overall performance in Python within the Flask framework

### Developer Intern

Jan 2022 – Sep 2022

SAP

Vancouver, BC

- Implemented an automatic test environment setup job, reducing setup from 2 days to 30 minutes, by utilizing API endpoints to facilitate automation
- Reduced processing time for an ownership assignment of 34,000+ files across multiple teams by 95% through the usage of Python, Bash and Git to determine ownership
- Accomplished robust system testing by designing and implementing a Jenkins job to load 1.5 million mock users onto systems at 10,000 users per hour with REST API endpoints
- Oversaw daily merges for 10 teams of 12 developers each onto a main Git branch. Actively monitored Jenkins CI/CD pipelines to identify and address regressions to ensure code integrity swiftly

## TECHNICAL SKILLS

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**Languages:** Python, PostgreSQL, JavaScript, HTML/CSS, Java, C++

**Technologies:** Flask, Git, Linux, Rest APIs, TCP/IP, React, Nginx, Docker

**Coursework:** Networking, Databases, Operating Systems, Graphics, Intro to AI, Quantum Algorithms

## CLUBS

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### VikeSec | [vikesec.ca](https://vikesec.ca) | *CyberSecurity, Kali Linux*

Jan 2023 – Present

- Executive Member of UVic's CyberSecurity club. Hosted VikeCTF 2023 for over 1000 users, providing unique challenges. Participated and earned 2nd place at CyberSci 2022 in the British Columbia region

### VikeLabs CourseUp | [courseup.vikelabs.ca](https://courseup.vikelabs.ca) | *React, TypeScript, Git*

Jun 2021 – Present

- Developer for an improved course-building tool for UVic students used by thousands. Implemented dynamically sized schedules, as well as course requisites, displaying nested React components

## PROJECTS

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### Raytracer | *C++, Graphics Pipeline, Shaders*

- Successfully implemented the local illumination model, incorporating ambient, diffuse, and specular reflections, showcasing a deep understanding of computer graphics and ray tracing principles
- Optimized performance by efficiently handling complex scenarios, including hollow spheres and lights inside spheres, ensuring the program's reliability and accuracy

### Personal Website | *GO, Gin, Nginx, Docker, PostgreSQL*

- Hosting and deploying website using Nginx and Docker, serving as a comprehensive platform for my resume, career details and a Spotify web application
- Using GO, Gin and PostgreSQL to build out a web application, using oAuth to connect user accounts with their Spotify while hosting users and details in the database