

# GABRIEL VAINER

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vai9er



gabe-v



## SKILLS

### Languages

Python, Java, JavaScript, SQL, C, Bash, HTML5

### Libraries

NodeJS, Selenium, Pandas, NumPy, Docusaurus

### Tools

Git, Docker, Maven, Wordpress,  
Jira, Postman, Confluence

**Databases** MySQL, Firebase, Mongo

**Platforms** Linux/UNIX, macOS, Windows

**Frameworks** React, Django, Spring, Springboot,

## EXPERIENCE



### Software Engineer Intern, Empyrean Medical Systems, Miami

Apr 2022- Jan 2023

C, Bash, NodeJS, Git, JIRA

- Rebuilt Empyrean's Dosimetry Calculation Engine in [C](#), implementing [Dose Calculation Algorithms](#) and [Voxel Interpolation Methods](#) to compute estimated and effective ionizing radiation doses for [Interventional Radiology](#)
- Constructed [TCP/IP](#) socket protocols within the engine to facilitate effective communication of dose calculations between users and [Interventional Radiology](#) devices.
- Transformed the original engine into a well-structured, non-monolithic system, reducing the main engine file by [64%](#) while maintaining functionality, responsibility, and clean architecture.



### Software Developer Co-op, Royal Bank of Canada, Toronto

Jan 2022- April 2022

Java, Spring, Git, Jenkins, JIRA, Maven

- Enhanced and optimized RBC's [Client Systems application](#) with the XQ40-Phoenix Labs team
- Utilized [Java](#), [Maven](#), [Postman](#), [Git](#), and Spring to implement new Microservice backend features for the Featured File Scenario and Profile Compliance APIs
- Implemented comprehensive end-to-end test cases using the [Cucumber](#) Framework to ensure the reliability, functionality, and performance of critical software systems
- Collaborated with a cross-functional team of developers, designers, and product managers through [Agile](#) methodologies such as [Scrum](#) and [Kanban](#) to deliver high-impact software solutions on time and within budget



### Contract Developer, Taichi Graphics, Toronto

Nov 2022- Feb 2023

React, Python, Docusaurus

- Designed, wrote, and polished Taichi's frontend application for technical documentation using [React](#) and [Docusaurus](#), enabling developers and contributors to quickly set up and run Taichi's open-source projects.
- Facilitated communication with end-users and other team members to incorporate feedback into deliverables, ensuring the highest level of user satisfaction and product quality.



### Teaching Assistant, University of Toronto, Toronto

Jan 2023- Present

Python, Crowdmark

- Facilitated student learning and engagement as a lecture TA for [CSCA08](#), an introductory course on procedural programming in [Python](#) and core computer science topics including [Algorithms](#) and [Time Complexity](#)
- Assisted first-year university students in understanding course material, graded midterms and exams to evaluate their progress, and provided individualized support during office hours.



## EDUCATION

University of Toronto

Honors Bachelor of Science – Computer Science Specialist, Software Engineering Stream

Awards: Dean's list 2021, University of Toronto Entrance Scholarship

Toronto, ON

Sep 2020 – Present

## PERSONAL PROJECTS



### Promedio – Online Grade Calculator

Sep 2022 – Dec 2022

MongoDB, Express.js, React, NodeJS

- Developed a website using the MERN stack to help 400+ University of Toronto students track their academic (cGPA) progress
- Architected a MongoDB backend to develop schemas and REST API endpoints and implemented a React frontend through React Axios and Material UI components, reducing the average time spent in academic calculations from 4 minutes to 2 seconds



### BookMeBot - Gym Booking Chatbot

Sep 2020 – Aug 2021

Python, JavaScript, NodeJS, Selenium, Git, MySQL

- Developed a chat-bot that allows users to quickly book multiple gym times in advance (via Discord and Facebook Messenger) without authentication or web navigation
- Worked on the booking automation API using Selenium and object-oriented Python and created a fully functional autobooking scraper for Crunch Fitness, Fit4Less, and LA Fitness



### deChess – Decentralized Chess Application

Sep 2021 – Nov 2021

ETHGlobal Hackathon, React, JavaScript, NodeJS, js-waku, Chessground

- Co-developed a decentralized platform to play and watch games of chess through secure peer-to-peer channels, featuring collectible and tradeable NFT pieces
- Worked on the UI design of the chess game using React and the Chessground library
- Implemented a peer-to-peer chat system with js-waku
- Won over \$6000 in prizes from 5 sponsors

### System Monitoring Tool - System Programming Assignment

Feb 2023

- Developed a C program to report various metrics of system utilization on Linux-based operating systems, including user and system usage
- Implemented a robust command-line interface with options for specifying the type of usage to be generated, graphical output, sequential output, and sampling frequency
- Designed the program to accept both flag and positional arguments for specifying the number of samples to collect and the time delay between samples, with default values of 10 and 1 second respectively

### Medical Scheduling App - Android Application Assignment

Aug 2020

- Designed a medical scheduling app using Java and Android Studio where patients can filter through doctors and schedule appointments, and doctors can track their patients and specify their availabilities for patients to book
- Deployed a Firebase database to reliably store patient and doctor information
- Administered the Scrum Agile methodology to increase team efficiency
- Collaborated with a team of 4 international teammates to work under a strict deadline

### Assembly Video Game – Computer Architecture Assignment

Jul 2021

- Utilized MIPS assembly language and MARS software to successfully develop a 2D rendition of the popular Traffic Racer game
- Designed an intuitive user interface with WASD input keys and multiple speed levels for enhanced gameplay

## EXTRACURRICULAR ACTIVITIES

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### Jazz Musician

Sep 2016 – Jun 2020

- Performed as a Saxophone and Clarinet Woodwind Doublist for the Toronto All Star Big Band, a professional jazz ensemble based in Toronto
- Served as the lead alto saxophonist for 91.1FM's Youth Big Band, led by renowned conductor Jules Estrin
- Participated in Humber College's Youth Jazz Program, studying under accomplished musicians such as Tara Davidson, David French, and Amanda Tosoff. Competed in MusicFest Canada, advancing to the National Stage round and receiving an Honour Award for outstanding performance