

Gabriel Ethan Vainer

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EDUCATION

University of Toronto

Bachelors in Computer Science; Software Engineering Stream

Toronto, CAN

Sep. 2020 – Apr. 2024

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

EXPERIENCE

Teaching Assistant

Jan. 2023 - Present

University of Toronto, **CSCA08**(Winter 23', Winter 24'), **CSCD03**(Fall 23')

Toronto, CAN

- Facilitated student learning and engagement as a lecture TA for an introductory course on procedural programming in **Python** and taught core computer science topics including **Sorting Algorithms**, **Complexity**, and **Testing**

Software Developer Intern

Apr. 2022 – Mar. 2022

Empyrean Medical Systems

Miami, USA

- Engineered a robust overhaul of Empyrean's **Dosimetry Calculation Engine** using **C**, integrating complex algorithms for dose calculation and voxel interpolation which enhanced precision in estimating effective ionizing radiation exposure for Interventional Radiology equipment
- Architected and deployed robust **TCP/IP** socket communication protocols within the system which streamlined real-time data exchange between users and IR equipment, elevating operational efficiency and reliability
- 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 Engineer Intern

Jan. 2022 – Apr. 2022

Royal Bank of Canada

Toronto, CAN

- Utilized **Java**, **Maven**, **Postman**, **Git**, and **Spring** to implement new Microservice backend features for the Featured File Scenario and Profile Compliance APIs within RBC's client systems application
- Implemented comprehensive end-to-end test cases using the **Cucumber Framework** to ensure the reliability, functionality, and performance of critical software systems.

Frontend Developer

Jan. 2023 - Present

Taichi Graphics

Toronto, CAN

- Engineered Taichi's internal technical documentation frontend using **React** and **Docusaurus**, streamlining developer engagement and project onboarding for the open-source community.

PROJECTS

UofT Blueprint | *Typescript, React, Next.js, Firebase*

- Led a team of 4 developers in architecting and implementing UofT Blueprint's website redesign and a custom CRM solution using **TypeScript**, **React**, **Next.js**, and **Firebase**, applying **Agile principles** for efficient sprint planning and task distribution.

deChess | *ETHGlobal Hackathon, ReactJS, Javascript, Chessground*

- Co-developed a P2P chess platform with NFT pieces and chat system using **React** and **js-waku** which won over **\$6000** from 5 sponsors

System Monitoring Tool | *C, Bash, Linux*

- Designed and deployed a high-accuracy Linux system monitoring tool in **C**, providing dynamic, real-time analysis of system metrics with a user-friendly CLI, advanced security features, and customizable graphical reporting.

BookMeBot | *Python, Javascript, Node.js, Selenium, Git, MySQL*

- Developed a **booking automation API** using **Selenium** and **Python** for a chat bot that allows users to quickly book multiple gym times in advance (via Discord and Facebook Messenger) without authentication.

TECHNICAL SKILLS

Languages: Python, C, Java, JavaScript, Typescript HTML, CSS, SQL

Frameworks and Databases: React, Django, Mongo, Spring, Cucumber, MySQL, Firebase, Next.js

Environments and Tools: Linux/UNIX, Maven, Selenium, Git, Node.js, Material UI, Postman, JUnit, Jira