

# Gabriel Ethan Vainer

647-271-6729 | [vai9er@gmail.com](mailto:vai9er@gmail.com) | [linkedin.com/in/vai9er](https://linkedin.com/in/vai9er) | [github.com/vai9er](https://github.com/vai9er) | [vainer.dev](https://vainer.dev)

## EDUCATION

---

### University of Toronto

*Bachelors in Computer Science; Software Engineering Stream*

Toronto, CAN

*Sep. 2020 – Dec. 2024*

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

## EXPERIENCE

---

### Software Developer Intern

*Empyrean Medical Systems*

Apr. 2022 – Present

*Florida, USA*

- Created a **C# Controller API** for real-time system updates on **DWIN DGUSII LCM** displays by utilizing the **.NET SerialPort** library for implementing secure packet transmission and validation protocols.
- Integrated **Dose Calculation Algorithms** and **TCP/IP** socket protocols into Empyrean's Dosimetry Engine in **C**, optimizing **voxel-based radiation transport simulations** for Radiology equipment.
- Reduced the engine codebase by **64%** through modular refactoring while maintaining functionality, responsibility, and clean architecture.

### Software Engineer Intern

*Royal Bank of Canada*

Jan. 2022 – Apr. 2022

*Toronto, CAN*

- Contributed to the **Retail Banking Payments Technology & Integrations API Lab** by developing **microservices** for RBC's Client Systems application, enhancing features for the File Management and User Compliance APIs using the **Spring Core Framework**.
- Utilized the **Cucumber Framework** to implement end-to-end application test cases with a **BDD** approach to validate the performance and functionality of the client system.
- Authored detailed documentation in **Confluence**, including setup steps and architecture overviews, to help new developers onboard and navigate the API Lab workspace.

### Frontend Developer

*Taichi Graphics*

Jan. 2023 - Apr. 2023

*Toronto, CAN*

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

### Teaching Assistant

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

Jan. 2023 - Present

*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**

## 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*

- Contributed to a **peer-to-peer chess platform** 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.

## TECHNICAL SKILLS

---

**Languages:** Python, C, C++, C#, Java, JavaScript, Typescript HTML, CSS, SQL, Haskell

**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