

Gabriel Vainer

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EDUCATION

University of Toronto, Toronto
B.S Computer Science

September 2020 - Present
2020-2021 Dean's Honor Roll

TECHNICAL SKILLS

Programming Languages: JavaScript, TypeScript, Java, C, Python

Frameworks and Databases: React, Django NodeJS, Next.js, Spring, Cucumber, Firebase, MongoDB, PostgreSQL, Tailwind

Tools: Git, Postman, Linux/UNIX, Maven, Selenium,

WORK EXPERIENCE

Project Lead, UofT Blueprint, Toronto, ON

January 2024 – Present

- Currently working with the internal team on the redesign of Blueprint's website, which includes a connected Admin Dashboard as well as a CRM tool for Blueprint to use.

Teaching Assistant, University of Toronto, Toronto, ON

January 2023 – December 2023

- 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 Complexity.

Software Developer Intern, Empyrean Medical Systems, Miami, FL

April 2022 – March 2022

- Engineered a robust overhaul of Empyrean's Dosimetry Calculation Engine using C
- Integrated 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.
- 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, RBC, Toronto, ON

January 2022 – April 2022

- 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, Taichi Graphics, Toronto, ON (Remote)

November 2022 – February 2023

- Crafted Taichi's sleek technical documentation frontend using React and Docusaurus, streamlining developer engagement and project setup for the open-source community.
- Facilitated communication with end-users and other team members to incorporate feedback into deliverables, ensuring the highest level of user satisfaction and product quality.

PROJECTS

Open-Source Development, Pandas, Cython, Python

- Led optimization of Pandas' DataFrame.corr(), introducing a Cython-based multi-threaded approach with a 'parallelize' option, significantly speeding up Spearman and Pearson calculations without accuracy loss.
- Developed and integrated a diff() method for the pandas Index class, enhancing functionality and code efficiency by leveraging existing Series diff() logic, and ensured robustness with comprehensive test cases

deChess, React, 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

- Wrote a Linux system monitoring tool in C which provided a dynamic, real-time analysis of system metrics with a user-friendly CLI, advanced security features, and customizable graphical reporting.
- Utilized forks and pipes to establish a parallel execution of data collection processes, enhancing the tool with concurrency.

Promedio, Mongo DB, Express.js, ReactJS, Node.js

- Built a website with MERN stack to help 400+ students track their cGPA and reduced academic calculation time from 4 minutes to 2 seconds.

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.