

Rahul Kumar Sinha

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Education

Bachelor of Science, Computer Science.

Expected Graduation: May 2024

The University of British Columbia – Vancouver, BC.

Courses: Data Structures & Algorithms, Java OOP, Web Applications, Databases, Computer Vision, Software Engineering, Operating Systems, Discrete Mathematics.

Involvements: NwHacks Mentor (Western Canada's Largest Hackathon), Meta (ABCS Fellow).

Experience

Smile Digital Health – Toronto, ON.

May 2022 – Dec 2022

Software Developer Intern

- Implemented real-time data streaming of HL7 FHIR resources which allowed clients to view the medical history of patients. (**Java, Spring Boot, Docker, Typescript, ReactJS, GraphQL**).
- Improved the UX by iterating on client feedback and decreased the load time of multiple components.
- Decreased an essential component's load time on the home page by 10x by rebuilding it in a new **GraphQL** query implementing pagination with infinite scrolling.
- Improved system scalability and minimized the number of times CI/CD pipelines are triggered (10 minutes per time) by implementing feature flags for new product features.
- Verified the functionality of features by troubleshooting APIs and writing test cases with >95% code coverage using **Docker, Postman**, and **Shell scripts, Jest**.

Change Healthcare – Vancouver, BC.

Sep 2021 – May 2022

Software Engineering Intern

- Designed and built a web app that enabled radiologists to review new X-rays being added to Change Healthcare's database. (**ReactJS, JavaScript, GraphQL, MongoDB, C#, ASP.NET**).
- Accelerated the X-ray load time by 45% by replacing previous CLI tooling with a web app including CRUD features such as posting notes.
- Improved test coverage from 70% to >90% by executing complex load and performance tests using **Python's Selenium** Framework.
- Introduced **linting** to surface and correct 500+ type and stylistic errors.

Projects

AI Image Generation App – *React.JS, Node.JS, Express.JS, Tailwind CSS, MongoDB*

Feb 2023 – Feb 2023

- Developed and deployed a full-stack AI web application that facilitates real-time image generation and handles requests to the backend server by integrating **OpenAI's API**.
- Designed a responsive and dynamic frontend using **React.JS**, and achieved custom designs using **Tailwind CSS**.
- Integrated **MongoDB** with the **Node.js** server for building the backend, and utilized **Express.js** for server-side rendering in the application

Stock Trading App – *PHP, MySQL, HTML/CSS, Figma*

Jul 2022 – Aug 2022

- Led a team of 3 to develop a relational database application for stock traders leading to a final grade of 100%.
- Implemented numerous **SQL** queries with an interface for users to specify conditions using **PHP** and **MySQL**.
- Minimized redundancy and improved data integrity by normalizing databases.

Fantasy Football App – *Java, Junit, Swing*

Sep 2020 – Dec 2020

- Developed a full-stack Fantasy Football app using **Java** and **Swing** API featuring a playable platform and panels to display players' ratings and save/load game functionality.
- Achieved 100% code coverage with **JUnit** to prevent future regressions while following Object-Oriented Programming principles to optimize robustness.

Skills

Languages: Java, PHP, JavaScript, Python, C, C++, C#, SQL, React.

Libraries/Frameworks: React, SpringBoot, Bootstrap, ASP.NET Core.

Tools/Technologies: Node, HTML/CSS, Git, Jira, Docker, Selenium, JUnit.