RYAN WU

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 github.com/b0bhat 🌐 b0bhat.github.io/portfolio

TECHNICAL EXPERIENCE

Software Engineer Co-op @ Rivian Automotive Inc. *Jan 2023 - Aug 2023*
- Contributed to development in cloud, vehicle, and mobile systems, ensuring optimal performance and scalability across diverse platforms and industry technologies including AWS S3, Firebase, and Datadog.
- Designed and implemented integration solutions, ensuring seamless compatibility and interoperability across a multitude of software systems while contributing to cross-functional collaboration within the organization.

Full-stack Developer @ New Step Consultation Services *2021 - ongoing*
- Planned and developed an web-hosted application to efficiently manage employee workloads and streamline organizational tasks, handling over 10k records for payroll processing.
- Implemented RESTful APIs and hosted on Heroku to develop a stable and secure application architecture, ensuring fast response times and seamless interaction for employees and administrators.

PROJECTS - **For more projects and detailed write-ups, visit b0bhat.github.io/portfolio**

Employee and Project Management System *Java, SQL, JS, HTML*

Developed a comprehensive application for tracking employee schedules and project assignments, replacing a spreadsheet-based system with a robust solution.

Fetal Health Convolutional Model *Python*

Optimized a Deep Convolutional Neural Network on fetal heart rate ultrasounds, achieving a 78% accuracy rate in predicting hypoxia by processing and converting waveforms into recurrence plots.

Vancouver Tour Routes *Python*

Designed an optimal point selection algorithm to construct interesting tour routes.
Efficiently merged OpenStreetMap and Yelp datasets with almost 200k points with fast data structures.

N-body Simulator *C++, GLFW*

Utilized parallel computing techniques to efficiently simulate the n-body problem in physics and visualizing chaos theory as minute alterations in initial conditions cascade into large changes.

Panoramic Image Stitching *MATLAB*

Implemented a resilient image stitching algorithm with RANSAC and FAST-based feature matching technique, transforming different angles and positions into seamless panoramas.

EDUCATION

🎓 **Simon Fraser University**, **B.Sc.** in Computing Science *2020 - 2024*
Faculty of Applied Science | Dean's Honour Roll

SKILLS

Languages	>_	C, C++, Java, Python, SQL, C#, MATLAB, JavaScript, HTML/CSS, Lua
Technologies	>_	AWS (S3, EC2), OpenGL, Heroku, MsSQL Server, PostgreSQL
Other Experience	>_	Tutor | *Independent / Kumon Math and Reading Center* *2019 - 2023* Cashier | *The Adventure Zone* *2017 - 2020*
Awards	>_	Queen's Venturer Award | *Scouts Canada* *2018* Science Fair Engineering Award | *Richmond Christian School Science Fair* *2016*