

# Bill Li

*bill-l1.github.io*

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## Education

- Sept 2019 – **Candidate for Bachelor of Computer Science (BCS), University of Waterloo**  
Apr 2024 *4A Computer Science, Honours, Co-operative Program, President's Scholarship of Distinction*
- Relevant Courses: Algorithms, Data Structures, Operating Systems, Machine Learning, Artificial Intelligence, Computer Graphics

## Skills

- Front-end React, React Native, React Native Web, Redux, Next.js, Vue.js, Nuxt.js, Expo
- Web Node.js, Express, Web3, Laravel, Flask, Docker, MongoDB, Heroku, AWS, Firebase, WebGL, HTML, CSS
- General JavaScript, TypeScript, Python, C#, C++, Java, Kotlin, PHP, MySQL, Git, Linux, Bash
- Graphics WebGL, OpenGL, GLSL, TWGL.js, Three.js, Shadertoy
- Machine Learning PyTorch, TensorFlow, Keras

## Experience

- Jan–Apr 2023 **Software Developer, Cover**  
*Los Angeles, CA*
- Built key features for a document management platform made with **Nuxt** (Vue), greatly improving ease of use and reducing load times by up to 90%.
  - Built design tools for manipulating complex 2D geometry and geospatial data, used in every project.
  - Refactored and documented improvements to scalability and maintenance for legacy systems.
- May–Aug 2022 **Full-stack Developer, Hypotenuse Labs**  
*Remote*
- Led a team for 2 weeks to build a critical MVP for client stakeholders.
  - Built key features for a Web3/NFT marketplace ([link](#)) using **Next** and **ethers**, creating support for important future releases with new token standards.
  - Added OAuth user authentication and maintained data parity with existing Web3 users.
- Jan–Apr 2021 **Full-stack Engineer, Zamplo**  
*Remote*
- Built a provisioning and research tool in **React Native Web** and **Redux** to support app development.
  - Built a service for CRM integration on an existing API, created in **Flask** (Python), improving the data collection workflow for sales and marketing teams.
- May–Aug 2020 **Full-stack Developer, eleven-x**  
*Waterloo, ON*
- Built data visualization tools for a **Laravel + Vue** (PHP/JS) IoT (Internet of Things) analytics platform.
  - Implemented automated unit testing and created scripts for performance monitoring.
  - Built payload decoders for several parking sensors currently serving UBC.

## Projects

- Sept 2023 – **Optimizing Pokémon Battle Strategies with Reinforcement Learning**  
Present
- Trained a Deep Q-Network to play a highly stochastic game using **Keras + TensorFlow (Python)**.
  - Built a self-play environment to further improve the model.
  - Achieved a **70% success rate** against a random player.
- [github.com/bill-l1/pokemon-showdown-rl](https://github.com/bill-l1/pokemon-showdown-rl)
- Jan-Aug 2021 **Resonance**
- Directed a team of 5 to make a music sharing app for Web, iOS and Android.
  - Built core features for the **React Native Web/Expo** mobile client, using **Redux** for state management.
  - Created architecture for Spotify authentication in the API, built with **Express** (Node) and **MongoDB**.
  - Developed entirely in **TypeScript** (ES6).
  - Performed Scrum meetings and weekly code reviews for fellow engineers.
  - Received **67 sign-ups** for the MVP.
- [Link to demo](#)