VICTOR WEI

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TECHNICAL SKILLS

Languages: Typescript, Javascript, HTML/CSS, Python, C++, C, Java, SQL, Bash, Rust
Developer Tools: Linux, Git, Jira, AWS (EC2, S3, Cloudfront, EKS), Cloudflare, Webpack, Docker, Helm, Vim
Technologies/Frameworks: Node.js, Express, React, Angular, Nginx, PostgreSQL, Kubernetes, Socket.io

WORK EXPERIENCE

Incoming Software Engineering Intern | *TD Securities @ Toronto*   **Sept 2023 – Dec 2023**

Game Developer Intern | *ArenaX Labs @ Toronto*   **Jan 2023 – Apr 2023**
- Optimized player model performance in an AI-powered platform fighter game, resulting in a **20%** fps improvement.
- Fine-tuned the learning rate of the in-game Bayesian neural network by isolating regularization lambdas, improving the training efficiency for movement and action outputs.
- Refactored the codebase from **Javascript** to **Typescript**, enabling a smoother workflow and higher code quality.

Co-Founder | *Miniblox @ Waterloo*   **Sept 2022 – Present**
- Launched a multiplayer voxel game written in **Typescript** using Three.js/Socket.io, currently garnering over **10K MAUs**.
- Developed a streamlined CI/CD pipeline with **Github Actions** to build and release to **S3**, which is served on **Cloudfront**.
- Built a highly-scalable distributed infrastructure system using **ArgoCD** to auto-deploy Helm charts in **DigitalOcean K8s**.
- Achieved **20K ARR** by integrating in-game micro-transactions and video ad monetization through **Stripe and Adsense**.

Full Stack Developer Intern | *Voiceflow @ San Francisco*   **May 2022 – Aug 2022**
- Developed and deployed a full-stack feature from end-to-end using **React/Redux**, which streamlined the visual markup process and significantly improved engagement and canvas flow for users.
- Led an initiative to track and improve the performance of key components, leveraging **LogRocket & Sentry** to send customers' aggregated performance data and reducing client-side errors by **15%**.
- Translated designs into front-end components and tackled **UI/UX** bugs and enhancements with **Styled Components**.
- Updated data types and performed database operations using **SQL queries** to integrate new features and improvements.

Software Engineering Intern | *Mitra Biotechnologies @ Waterloo*   **Jul 2021 – Apr 2022**
- Developed and optimized a convolutional neural network using **Tensorflow/Keras** to predict potential heart diseases in patients, reducing time-to-intervention for a cardiovascular case from **30 to 2 minutes.**
- Researched and implemented the algorithm within a Doctor-to-Patient app using **React Native** to seamlessly allow doctors and patients to track their progress.

PROJECTS

AirFlip | *TensorFlow MoveNet, Web Speech API, React*   **Aug 2021**
- Built an award-winning **React user interface** to provide users more seamless methods to flip through documents using gesture detection and speech recognition; won the **finalist award** (out of 477 teams) at Hack the North 2021.
- Utilized the **Tensorflow MoveNet** pose detection model to track the user's key facial points and built a custom feed-forward neural network to predict the gestures required to flip the page in real-time.
- Employed the **Web Speech API** to provide an alternative method to flip pages based on keywords spoken by the user.

QuickMark | *MEAN Stack, OpenCV*   **Jan 2021**
- Developed an acclaimed web app utilizing the **MEAN** stack which automatically crops assignment questions using **OpenCV**, enabling teachers to mark multiple tests/assignments simultaneously.
- Led the project collaboration as a team of four and achieved the **finalist award** at Hack the North 2020++.

AWARDS

Lanxess Canada Scholarship | *Awarded $10,000 for leadership acumen*   **Feb 2023**

René Descartes National Scholarship | *Awarded $20,000 for distinguished extracurricular involvement*   **Apr 2021**

Software Engineering Entrance Scholarship | *Awarded $4,000 for excellence in academic performance*   **Apr 2021**

EDUCATION

Bachelor of Software Engineering | *University of Waterloo*   **Sep 2021 – Apr 2026**