Eric Xu

✉ e29xu@uwaterloo.ca ⭘ github.com/ericx20 🌐 ericxu.net

Languages: JavaScript TypeScript HTML CSS Python C/C++ Ruby

Technologies: React Redux Vue Svelte Node.js Express.js Jest Git React Native

Experience

Relay Financial | Full Stack Software Engineer *May 2024 – Aug 2024*
- Simplified the registration process to reduce drop-off rates by **2.2%** on Relay's online banking platform
- Discovered and fixed a vulnerability in the backend using **Node.js** and **Express.js**
- Spearheaded major accessibility improvements such as keyboard navigation support with **HTML** and **CSS**
- Designed and implemented a new flow for accepting invites on Relay's **React Native** mobile app

Capital One Canada | Front End Software Engineer *Sep 2023 – Dec 2023*
- Improved screen reader and keyboard support for homepage with **40,000** daily visitors using **JavaScript** and **HTML**
- Built 5 foundational components for the company's next generation **React** component library with **TypeScript**
- Implemented accessible Modal Dialog with systems for limiting screen reader and keyboard interactions within modal

Vidyard | Software Developer *Sep 2022 – Apr 2023*
- Worked on the Onboard team to improve the new user experience on Vidyard's sales video platform
- Implemented an overlay with **Vue** to guide users to settings page, helping **14%** more users correctly setup video settings
- Fixed Chrome extension bug causing users to record multiple videos at once, saves **330,000** redundant clicks per month
- Maintained a **Ruby on Rails** backend and migrated the **SQL** database to drop obsolete data

Hemora Ltd. | Front End Developer *Jan 2022 – Apr 2022*
- Designed and built the entire front end of Hemora's flagship map app with **React** and **TypeScript**
- Implemented an offline-first map editor for solar technicians with queueable network requests using **Redux**
- Constructed an interactive map editor UI controlled by an **XState** state machine to guarantee expected UI behaviour
- Designed the company's logo, brand identity, website and custom icons with **Figma**

Molex Canada | Front End Software Developer *May 2021– Aug 2021*
- Created a web app in **Vue** and **TypeScript** for configuring devices that control automated assembly lines
- Maintained **Vue** web app for remotely configuring industrial automated systems
- Wrote unit tests with **Jest** and End-to-End tests with **Gauge** and **Python**

Projects

CrystalCube⧉ *2023 – Present*
- Invented an online tool to train Rubik's Cube skill using **React** and **TypeScript**, endorsed by a world-class speedsolver
- Wrote and optimized a DFS algorithm to find the best solutions for part of the cube **34x faster** than its competitor
- Pioneered the first 3D cube visualizer for highlighting incorrect pieces with **Three.js**

AlgDB⧉ *2023 – Present*
- Developed full-stack **Next.js** web app for centralized Rubik's Cube algorithm database with a team of 10 engineers
- Implemented **SSO** authentication using NextAuth and Prisma with a custom OAuth provider for World Cube Association

ZZMethod.com⧉ *2023 – Present*
- Established a **Next.js** website for learning Rubik's Cube technique with over **30,000** page visits
- Implemented interactive 3D visuals and wrote **16,000+** words of high-quality articles with a team of 3 experts

Virtual Yearbook⧉ *2021*
- Created a web app with **Svelte** for signing digital yearbook pages via shareable links during the pandemic
- Implemented a canvas with adjustable brush size & colour, undo/redo and image export using **JavaScript**
- Built a **Node.js** backend with **Express.js** for endpoints and **MongoDB** database

Education

University of Waterloo | Bachelor of Software Engineering *2020 – Present*