Sarah Chow

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TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, Rust
Frontend + Backend: React, React Native, Next.js, Redux, D3.js, HTML5, CSS3, SASS, jQuery, Bootstrap, Tailwind, Chakra UI, Node.js, Express, GraphQL, Firebase, MySQL, PostgreSQL, SQLite, MongoDB, Redis
Build Tools + Mobile Development: Babel, Webpack, Vite, Expo, Context API, Hooks, Native Modules
DevOps + Testing: Docker, Kubernetes, Jenkins, Jest, Mocha, Chai, Jasmine, Cypress

EXPERIENCE

***Senior Software Engineer* @ The HydroVac App** **2025**

- Developed modular, responsive components in *React Native* to streamline scheduling workflows, enhancing code reusability and preventing UI-related bugs by over 30% during initial testing.
- Coordinated cross-platform development using *Expo*, reducing setup and build time by 45% and accelerating product delivery, while ensuring interface consistency across iOS and Android devices.
- Incorporated *Firebase* and *Firestore* to secure user authentication and live data management between clients, reducing backend overhead and supporting seamless multi-user access with near-zero latency.
- Maintained the large-scale application using *TypeScript*, resulting in a 30% reduction in bugs.

***Software Developer* @ Datawisp** **2023 – 2024**

an AI-powered platform for intuitive data analysis

- Deployed advanced natural language processing models using *OpenAI GPT-4* architectures, resulting in a 20% improvement in text generation accuracy and an increase in engagement across the platform.
- Expanded on the concurrent system in *Rust*, increasing processing speed and reducing memory usage.
- Introduced *Argos CI* for visual regression testing, ensuring UI consistency and catching visual defects early, which led to a 30% reduction in post-release visual bugs and improved overall product quality.
- Developed interactive data visualizations using *D3.js*, transforming complex data sets into insightful and user-friendly charts and graphs, resulting in a 40% increase in data comprehension.

***Software Engineer* @ Poseidon** **2022**

a cluster visualization and cost analysis tool developed under OSLabs

- Implemented server-side rendering with *Next.js* to optimize application performance, resulting in a 40% decrease in page load times and a 25% increase in organic search traffic due to improved SEO.
- Executed end-to-end tests using *Cypress*, resulting in a 40% reduction in post-deployment bugs.
- Leveraged *Docker* and *Kubernetes* to ensure consistent performance of interdependent apps by enabling flexible scaling processes; this reduced deployment time and minimized the risk of conflicts and errors.
- Utilized *Tailwind CSS* to design the user interface, accelerating the development process by 30%.

OPEN SOURCE

Umpire — a film endorsement app **2021**

- Designed a scalable *PostgreSQL* database schema to handle complex queries and large datasets, improving data retrieval speed by 40% and supporting high-traffic user interactions efficiently.
- Configured *Webpack* to optimize and bundle application assets, improving load times and performance.
- Developed and maintained comprehensive test suites using *Jest*, achieving 95% code coverage and significantly reducing the number of post-deployment bugs, enhancing overall code quality and reliability.

PaperPrompts 2.0 — an iteration of a flash cards app **2020**

- Incorporated *Redux* into an existing codebase to manage application state while creating custom middleware to extend functionality which contributed scalability with refined performance.
- Engineered a secure and user-friendly authentication system by integrating *Google OAuth*, leading to an increase in user sign-ups while enhancing the security of sensitive user information.
- Designed and developed with *Express 4.0*, 10+ RESTful API endpoints that enabled smooth communication between the front and back-end components.

Off My Couch — an event finder web app **2019**

- Leveraged *Vite* for its fast hot module replacement and optimized build process, reducing build times.
- Revamped the styling architecture of a complex web application using *SASS*, which streamlined the CSS codebase, reduced file size, and enhanced maintainability, leading to a decrease in styling-related bugs.
- Designed and implemented responsive, mobile-first web interfaces using *Bootstrap*, ensuring cross-browser compatibility, which led to a 5% increase in user engagement.

EDUCATION

The University of Texas at Dallas — B.S. Computer Science