# Will Zhang

## Front-End Software Engineer

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**Portfolio:**
[willzhang.vercel.app](willzhang.vercel.app)

## SUMMARY

Software Developer with 5 years of experience with a focus in frontend application development, specializing in crafting interactive, user-friendly and accessible user interfaces.

Expertise in developing React/Next.js Single-Page Applications (SPAs), utilizing Redux for state management, React Hooks, Component Communication, and clean styling methods.

Expertise in an array of languages and frameworks, including React, Next.js, Redux, HTML, CSS, SCSS, React Native and Swift.

Extensive experience in integrating web services through RESTful API and GraphQL, and constructing web service APIs in line with both REST and GraphQL architecture.

Familiarity with backend frameworks such as Express, Django and Ruby on Rails, data structures and Object-Oriented Programming (OOP) design patterns for web APIs, exhibiting a comprehensive understanding of full-stack development.

Experience in developing and maintaining component libraries using React, CSS/SASS modules and storybook.

Strong background in UI/UX design with a proven ability to manage design systems and translate complex designs into functional, responsive and accessible interfaces.

Skilled in accessibility compliance, crafting seamless user flows, developing high-fidelity prototypes, and conducting usability testing to ensure intuitive and inclusive user experiences.

Proven effectiveness in Agile environments that demand robust problem-solving abilities and exceptional communication skills.

Disciplined and hardworking team player with strong critical thinking skills and adaptability to new technologies.

## SKILLS

**Languages**:
JavaScript, TypeScript, HTML5/CSS3, Python, Swift, C++, SQL, GraphQL

**Frontend Technologies:**
React, Next.js, Redux, Express, Bootstrap, SASS, TailwindCSS, Webpack, React Query, SWR, React Native, Expo, Styled components, Framer Motion, Storybook, SwiftUI

**Backend and Database:**
Express, Node.js, Django, Ruby on Rails, MySQL, Google Firebase

**Testing, CI/CD, Deployment:** Jest, Cypress, React Testing Library, Git, Github Action, Docker, AWS

**UI/UX Design:** Figma, Adobe XD, Adobe Illustrator, Adobe Photoshop

# EXPERIENCE

## Front-End Engineer

Walmart, Sunnyvale, CA | Nov 2023 - present

Walmart is a global leader in retail with a chain of hypermarkets, discount department stores, and groceries. At Walmart, I contributed to the development and enhancement of an internal reliability platform that is instrumental in monitoring the health, alerts, and incidents across Walmart's products and services, significantly improving incident prevention and recovery times.

- Developed and implemented new features and pages for the reliability platform utilizing **Next.js**, integrating feature flags to facilitate seamless rollouts and testing.
- Enhanced platform reliability and coverage through comprehensive End-To-End testing with **Cypress**, complemented by integration and unit testing using **Jest**.
- Elevated user interface responsiveness and efficiency by developing custom React hooks, employing **React Query** for optimistic UI updates and cache management, resulting in a more dynamic and engaging user experience.
- Leveraged **Server-Side Rendering (SSR) and Static Site Generation (SSG)** techniques to significantly boost web performance and SEO, optimizing content delivery and visibility.
- Optimized **GraphQL** queries, improving data retrieval efficiency and server response times, resulting in an overall smoother application performance.
- Refactored **error handling** mechanisms to enhance robustness and user experience, implementing user-friendly interfaces and error messages.
- Identified and resolved errors in post-deployment hooks, improving reliability and robustness of application delivery.
- Collaborated with international and cross-team members to create data contracts ensuring seamless integration and consistency in data exchange standards.

## Software Engineer

AllTrails, San Francisco, CA | May 2022 - Oct 2023

AllTrails is a popular outdoor platform that helps people find curated trail maps around the world. On the AllTrails web platform, users can discover various trails with crowdsourced photos and reviews, tailoring their outdoor adventures to their individual needs and preferences.

- Built and maintained **reusable Next.js components**, interfaces and functions for the activity recording view, profile section and trail detail page across AllTrails' web application.
- Enhanced and standardized AllTrails' **design system and component library**, facilitating the development process and improving design consistency.
- Documented the component library with **Storybook**, integrating add-ons such as Storybook Docs for documentation, a11y for accessibility tests, Interactions for user test automation, and Controls for dynamic component input management.
- Integrated Next.js into the workflow, leveraging methods like lazy loading, server-side

rendering and incremental site regeneration, significantly **boosting web performances**.

- Leveraged **GraphQL** to streamline and optimize data fetching, enhancing the efficiency and responsiveness of the web application's frontend-backend communication.
- Adopted BEM naming convention and SASS module to create clean, scalable and maintainable styles across the platform.
- Collaborated with UX designers and developers to translate design prototypes into functional web components, bridging the gap between design and technical implementation.
- Utilized **Jest and React Testing Library** for robust unit testing, following a test-driven development (TDD) approach to ensure software reliability and quality.
- Advocated for and implemented **WCAG standards**, fostering an inclusive and accessible user experience across all digital platforms.
- Employed user-centered approach to design, help conducting user research and usability testing to gain insights and inform design decisions.
- Monitored user engagement metrics post-launch to identify areas of improvement, applying these insights to implement iterative updates and enhance the user experience.

## UX Developer

Neon Financial Inc, Chicago, IL | Oct 2021 - Apr 2022

Neon Financial Inc is a SaaS startup company that offers a "Buy Now, Pay Later" solution for bill and utility payments. It provides an interactive online dashboard which gives users an overview of their credit usage, bill payments, and impending charges. The platform also allows users to connect their utility providers and set up payment methods effortlessly.

- **Led the frontend development and design** of a data-rich dashboard, enabling customers to monitor credit usage and manage bill payments, resulting in improved user engagement and timely payments.
- Developed **reusable interactive React components** for a consistent UX across diverse devices and browsers, ensuring the dashboard accurately reflects credit usage and bill payment status.
- Integrate the frontend with a **Ruby on Rails backend** using **OpenAPI documentation**, ensuring an accurate and seamless interaction between frontend and backend.
- Refactored and migrated the Neon Financial's web application to **Ruby on Rails version 7**.
- Utilized **Hotwire Turbo Streams** along with React to reflect real-time updates of status in the frontend, enhancing the functionality and usability of the credit application.
- Created routes and actions for the Rails 7 application, ensuring seamless interaction and user flow.
- Orchestrated usability testing for the dashboard and credit application, leveraging feedback for data-driven UX enhancements, leading to increased user satisfaction.
- Designed comprehensive user flow and high-fidelity prototype using **Figma** based on user research findings.

## Software Developer

Li Auto, Shanghai, China | Sep 2019 - July 2021

Li Auto is a top-tier electric vehicle manufacturer in China. The company's official website, lixiang.com, not only serves as an informational hub about the company and its offerings, but also features a sophisticated online ordering system.

- Developed dynamic web applications using React, Redux, SCSS and Next.js for server-side rendering, significantly improving the user experience.
- Migrated the frontend codebase to **TypeScript** and **Next.js** for better type safety
- Engineered interactive UI components and a component library leveraging TypeScript, HTML5, and CSS.
- Integrated frontend with backend services using **Django** backend services via RESTful APIs, bolstering functionality and responsiveness.
- Extended web features to mobile by leveraging **React Native**, ensuring consistent user experience across platforms.
- Implemented **Redux** for state management and permission handling in the React Native app.
- Utilized Git and GitHub for version control, collaborative development and CI/CD.
- Applied **Jest** for unit and integration tests, ensuring software reliability.
- Collaborated with UX/UI designers to translate designs into functional, visually appealing web and mobile applications.

## Frontend Engineer

Trip.com Group, Shanghai, China | May 2018 - Aug 2019

Trip.com Group is a leading travel service provider in China. Its central platform, ctrip.com, is a trusted source for booking hotels, flights, and train tickets, as well as reserving spots at popular sightseeing attractions within the country.

- Contributed to the development of **high-traffic web applications** using React, Redux, and CSS, catering to complex user requirements.
- Partnered with UI/UX designers to craft responsive and accessible interfaces, heightening user engagement.
- Enhanced mobile user experience by developing features with **React Native**.
- Engineered intuitive components like map views and markers using **GPS and React Native libraries**, improving navigation and information display.
- Managed state logic and permissions in the React Native app with **Redux**, optimizing native feature access.
- Collaborated with the backend team, honing skills in **Django** for API development, and utilized **MySQL** for efficient database operations.
- Boosted frontend performance by integrating with backend services, and employed client-side caching for swift data retrieval.

## EDUCATION

### University of Michigan, Ann Arbor, MI

Master of Science in Information | User-Centered Agile Development

### Shanghai Jiao Tong University, Shanghai, China

Bachelor of Science in Electrical and Computer Engineering | Minor in Computer Science | Minor in Data Science