

# Arthur Liu

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## SUMMARY

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- Over 5 years of experience in developing cutting-edge web applications utilizing **JavaScript (ES6)**, **TypeScript**, **React**, **Redux**, **Next.js**, **Express.js**, and related technologies.
- Demonstrated mastery in constructing Web User Interfaces using **React**, adhering to the latest **W3C/WCAG** standards, and ensuring cross-browser compatibility.
- Proven skill in crafting mobile-friendly, responsive designs using **CSS/SASS** and implementing them in **React** for an optimal user experience across various device types.
- Adept at leveraging **React Native** to build high-performance, cross-platform mobile applications for iOS and Android, utilizing a shared codebase that upholds the "learn once, write anywhere" principle.
- Hands-on experience managing global application state using tools like **Redux**, **Flux**, and **Zustand**.
- Familiar with enhancing performance and **SEO** by implementing **Server-Side Rendering (SSR)** and **Static Site Generation (SSG)** using modern frameworks such as **Next.js** and **Nuxt.js**.
- Experienced in designing and implementing **micro-frontend** architectures utilizing technologies such as **Webpack 5's Module Federation** and **Web Components (Shadow DOM and HTML Templates)**.
- Familiar with building and utilizing **RESTful APIs** and **GraphQL** with **Node.js**, **Express.js**, and **Django**, in accordance with REST architecture and modern API design patterns.
- Skilled in leveraging cloud technologies like **AWS**, **Google Cloud**, and **Azure** for deploying, scaling, and managing web applications.
- Accomplished in the use of **Docker** and **Kubernetes** for containerization and orchestration, ensuring scalable and efficient deployment of web applications.
- Experienced in setting up and maintaining **CI/CD** pipelines using tools such as **Jenkins** and **GitHub Actions**, enhancing development efficiency and code quality.
- Extensive experience in writing unit and integration tests and building test cases with **Jest**, **React Testing Library**, as well as writing end-to-end (E2E) tests with **Cypress**.
- A dedicated team player with strong passion, excellent communication skills, and a continuous drive to learn new technologies.

## TECHNICAL SKILLS

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**Programming Languages:** JavaScript (ES6), TypeScript, HTML5, CSS3, Python, SQL.

**Client-Side Development:** React, React Native, Redux, Sass, Stencil, JQuery, Webpack, Babel, Flux.

**Server-Side Development:** Express.js, Node.js, Next.js, Django, Flask.

**Database:** SQLite, PostgreSQL, MongoDB, Firestore.

**Testing:** Jest, React Testing Library, Mocha/Chai, Cypress.

**Tools:** Git, Jira, Docker, Kubernetes, Storybook, D3.js.

**Cloud Services:** AWS, Google Cloud, Azure.

**Dev Methodologies:** Agile, Scrum, Waterfall.

## EXPERIENCE

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**Aston Technologies**, Minneapolis MN, **Full-Stack Developer**, May 2022 – Present

### Project: Logistic Portal

Logistic Portal is a comprehensive in-house logistics management platform designed to streamline the client's organizational processes and enhance workflow efficiency. The platform's dashboard serves as a centralized hub for managing a wide array of logistical tasks, such as expense tracking, allowance documentation, travel bookings, and more. Along with the web application, a cross-platform mobile application was also developed using React Native to extend the functionality to mobile devices. This solution leading to substantial time and cost savings for the client.

### Responsibilities:

- Developed and implemented modular, reusable **React** and **React Native** components and libraries by leveraging **React Hooks** and **Context API** to enhance the platform's maintainability and scalability.
- Designed and created versatile style components using CSS preprocessors like **Sass** for easy maintenance and reusability across the application.
- Implemented dynamic routing, nested routing, and redirection functionalities using **React Router** and **React Navigation** in the React Native application to optimize navigation within the application.
- Constructed sophisticated data visualization components utilizing **D3.js**.
- Utilized **Redux Toolkit** to manage global state efficiently and improve code readability.
- Integrated **Redux Thunk** middleware to enable seamless communication between the application state and back-end services.
- Established and maintained a **CI/CD** pipeline using **GitHub Actions**, enabling automatic code testing, and streamlining the deployment process.
- Collaborated with the team in deploying application updates and expansions using **Kubernetes** orchestration with **Docker** containers, ensuring seamless scalability and optimal resource utilization.
- Collaborated with the backend development team to develop backend services using **Node.js** and **Express.js**, implemented **RESTful APIs** to power both the web and mobile application.
- Wrote and executed unit and integration test cases with **Jest** and **React Testing Library** to ensure the application's robustness and reliability.
- Utilized **Git** for effective version control and streamlined collaboration within the development team.
- Participated in **Scrum** methodologies for project management, including daily stand-up meetings, sprint planning, and other relevant events to ensure timely and successful project delivery.

**Emergent Software**, Minneapolis, MN, **React Developer**, Jan 2021 – Jan 2022

### Project: The Tile Shop

This project aims to build an e-commerce website which offers a seamless shopping experience, enabling customers to browse through an extensive collection of tile designs, materials, and styles. With an intuitive interface and advanced search functionality, The Tile Shop allows users to find the perfect tiles for their projects. As a one-stop solution for all tile needs, The Tile Shop not only caters to individual customers but also serves professional designers, architects, strengthening the company's market presence and

expanding its clientele.

### **Responsibilities:**

- Developed a responsive Web Application using **React**, **Redux**, **TypeScript**, and other cutting-edge web technologies to provide an engaging user experience.
- Implemented dynamic and maintainable CSS templates by incorporating **SCSS** into React components, utilizing variables, mixins, and functions for better scalability.
- Employed **Redux** for global state management and integrating **Redux Saga** and **Redux Thunk** to handle asynchronous API requests efficiently.
- Implemented performance optimizations through code splitting, lazy loading, and **server-side rendering (SSR)** with **Next.js** to enhance page load times and overall user experience.
- Architected and constructed **micro-frontend** architectures leveraging **Webpack 5's Module Federation**, enabling seamless scalability and independent deployment of individual frontend components.
- Addressed web accessibility concerns by incorporating semantic tags, **ARIA** attributes, tag roles, keyboard navigation, and optimal contrast ratios.
- Developed and executed **unit and integration tests** using **Jest** and the **React Testing Library**, alongside **End-to-End tests** with **Cypress**, bolstering the application's reliability and robustness.
- Actively engaged in **Scrum** project management processes utilizing tools such as **Jira** and **Git**.

**Big Red Rooster Flow**, Northfield, IL, **Front-end developer** (Remote), Aug 2019 – Feb 2021

### **Project: E-Catalog Shopping Tool**

This project aims to build an effective e-catalog module that helps approved users to order the items they need for their branded sites quickly. It also provides a virtual shopping tool to offer users a more visual way to shop.

### **Responsibilities:**

- Developed dynamic web pages utilizing **React**, **Flux**, and CSS3 to create engaging user interfaces.
- Contributed to the design and integration of a 3D virtual shopping experience using **Three.js** and **Blender**, providing an immersive and interactive environment for users.
- Crafted reusable UI components, such as buttons, input areas, and drop-down menus, adhering to established UI standards and ensuring a consistent visual experience.
- Facilitated seamless communication between the 3D virtual shopping scene and the back-end services, ensuring a smooth and responsive user experience.
- Developed test cases and conducting unit tests using tools like **Jest** and **React Testing Library** to maintain the application's reliability and stability.
- Collaborated with fellow developers and employing Git for efficient version control and streamlined teamwork.