AKI GAO

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Profile

I am a software engineer with a passion for creating products that empower people and democratize technology. I believe in the power of leveraging compassionate design & thinking based on first-principles to drive product, engineering, and leadership. I offer over 3 years of professional experience in software development using functional programming/object-oriented paradigms and event-driven architectures in Agile environments. My areas of expertise are in front end, UX/UI, and digital accessibility, and my interests include functional programming, blockchain, and engineering productivity/leadership.

Work Experience

User1st - *Software Engineer - R&D*, Remote
February 2021 - Present

- Architect and implement the features & infrastructure for new accessibility product suite, includingAngular directive NPM package for automatic accessibility remediation, microfrontend for cross platform Toolbar component NPM package using Web Components & React, a monorepo codebase for external client facing NPM packages using Lerna, and payment gated NPM packages using token-based authentication for private NPM repositories using Verdaccio.

- Conduct regular code reviews for front end code, and advise/mentor junior developers on front end architecture, design patterns and general best practices.

- Perform large scale refactor to remove legacy code across the stack for flagship accessibility platform codebase from the front end (React/vanilla JS), back end (.NET) & infrastructure (Docker, Kubernetes & shell scripts) that reduced codebase size by 75%.

- Contribute core features and manage codebase infrastructure for automated accessibility remediation suite including automated accessibility fixers & test cases, decorator library for cross-cutting concerns, and Webpack configurations for compilation for browser script injection & import as module library, as well as CSS extraction.

User1st - *Solutions Integrator*, Washington, D.C./Remote
January 2020 - February 2021

- Remediated websites to comply with accessibility standards for 20+ clients, including a major wireless network operator and a Fortune 500 healthcare provider.

- Audited client websites and mobile applications for compliance with the WCAG 2.1 AA standard, Section 508 guidelines, and the ADA with assistive technologies such as JAWS, NVDA, VoiceOver and Talkback.

- Created internal tooling to automate tasks & improve productivity including:

  - A command-line tool to automate website URL discovery and auto-generate web page screenshots to reduce time estimations by 33% and improve accuracy by 50% for client websites.

  - A cross-browser extension to inject User1st's uRemediate runtime environment for client sites during accessibility remediation to replace unreliable tooling in 95% of use cases.

Skills

Languages:
Shell, JavaScript, TypeScript

Development and Testing Tools:
Git, NPM, Yarn, Webpack, Lerna, Babel, Mocha, Chai, Puppeteer, ESLint

Front End Technologies:
HTML, CSS, React, Redux, Emotion, Storybook, Next.js

Back End & Infrastructure Technologies:
Node.js, Express, Docker, Firebase

Education

The University of Virginia: School of Engineering and Applied Science (SEAS)
August 2016

- B.S. Computer Engineering & B.S. Electrical Engineering