AKI GAO

(703) 901-0568 | xiaoyu.akihiro.gao@gmail.com | iknowht.ml | github.com/iknowhtml | linkedin.com/in/iknowhtml

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 based on first-principles to drive product and engineering practices. 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 - *Full Stack Developer - R&D/U.S. Support Engineer*, Remote   February 2021 - Present

- Architect and implement Angular directive library for automatic accessibility remediation for new accessibility product suite, payment gated library packages using token-based authentication for private NPM repositories using Verdaccio, and microfrontend architecture for Toolbar Web Component library for flagship accessibility platform.
- 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).
- 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.
- Perform manual accessibility testing, provide on-call engineering support, and advise on workflow & infrastructure integration with User1st products for U.S. enterprise customers.

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

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