Nicholas Hoyt
Front-End Developer

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My track record of success as a front-end developer is based on staying up to date with front-end technologies such as reactive web components and user interface design best practices, and maintaining a relentless focus on the user experience by relating each product feature, as it is being developed, to users' actual goals and mental models.

Experience

University of Illinois Urbana-Champaign   Sept. 2005 – present

As interaction designer, user interface designer and front-end developer, the purpose of my work at UIUC is centered around producing open source software tools that foster awareness and better understanding of web accessibility.

Several of these tools have been adopted by the University of Illinois and other large university systems (e.g. Penn. State, Indiana University, Ohio State, University of Iowa) as their tools of choice for web accessibility evaluation.

- Designed and co-developed the 'Functional Accessibility Evaluator', a web application that spiders websites and produces evaluation results based on the entire range of WCAG 2.1 'A' and 'AA' Success Criteria.

- Designed and co-developed the 'AInspector for Firefox' browser extension, which performs the same type of accessibility evaluation as 'FAE' for a single web page, with additional features for dynamic content.

- Contributed navigation menu prototypes and interaction models to the Web Implementation Guidelines Group that is developing a comprehensive set of web components for use by campus web developers.

- Designed and developed the 'SkipTo Landmarks & Headings' browser extension, which provides navigation capabilities among selected ARIA landmarks and HTML headings on a web page.

- Designed and developed the 'Page Structure' browser extension, which enables comprehensive manual checking of the headings and landmarks structure and labeling on a web page.

- Designed and co-developed the 'A11yFirst plugins for CKEditor', which provide proactive guidance for accessible authoring, including proper heading structure and text alternatives for images.

- Designed and co-developed the 'Accessibility Bookmarklets', easily installable in any browser.

Skills

Front-End Development
- Modern JavaScript (through ES2019), HTML, CSS
- DOM scripting and event handling
- Git, Node.js, npm, Babel, webpack, Rollup, Gulp
- Responsive design, Sass
- Web components, Lit library, WebExtensions API

User Interface Design
- Requirements gathering and analysis
- Experience with creating wireframes, interactive prototypes, user stories
- Usability testing and accessibility evaluation

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Usability Testing

- Creation of interactive HTML/JavaScript prototypes
- Facilitation of remote and lab-based usability testing
- Quantitative and qualitative analysis of test results

Web Accessibility

- WCAG 2.1 requirements
- WAI-ARIA Authoring Practices, ARIA in HTML
- Accessibility evaluation and auditing

Education

B.A. in Computer Science, University of Massachusetts Boston

Summa cum laude

Resources

Code Repositories

- Page Structure
- SkipTo Landmarks & Headings
- AInspector for Firefox
- Accessibility Bookmarklets
- Copy Page Link

Installation Links

- Page Structure for Firefox
- SkipTo Landmarks & Headings for Chrome
- SkipTo Landmarks & Headings for Firefox
- AInspector for Firefox
- A11yFirst plugins for CKEditor
- Accessibility Bookmarklets