

Nicholas Hoyt

UX/UI Designer, Front-End Developer

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My track record of success as an interaction designer is based on utilizing design methodologies that focus on users' mental models and actual usage contexts. These methodologies result in a deeper understanding of users' goals, which is the essential prerequisite for producing software with an optimized feature set and user experience.

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 working JavaScript/HTML examples demonstrating accessibility best practices that were published as part of the WAI-ARIA Authoring Practices guidelines.
- 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

User Experience & Interaction Design

- Requirements gathering and analysis
- Development of conceptual models, personas, scenarios
- Essential use cases, user role- and task-models
- Creation of wireframes using Sketch, OmniGraffle and Figma

User Research & Information Architecture

- Field observations, contextual interviews
- Task-modeling workshops, wants and needs analysis
- Card sorting exercises, focus groups
- Paper prototyping, low-fidelity prototypes

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Usability Testing & Analysis

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

Web Accessibility & Inclusive Design

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

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

Education

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

Resources

Browser Extensions & Editor Plugins

- [AInspector for Firefox](#)
- [A11yFirst plugins for CKEditor](#)
- [SkipTo Landmarks & Headings for Chrome](#)
- [SkipTo Landmarks & Headings for Firefox](#)
- [Page Structure for Firefox](#)
- [Accessibility Bookmarklets](#)