

M. NICHOLAS HOYT

SUMMARY

Software developer and interaction designer specializing in user interface design and front end development.

Over thirty years of software design and development experience with a focus on user experience design and web application development using JavaScript, HTML & CSS. Significant experience in JavaScript (ES6 and later), Java, C and OCaml; interaction design; conceptual modeling; usability analysis and web accessibility evaluation.

EXPERIENCE

Software Developer & Interaction Designer, University of Illinois — 2005–present

Lead designer and developer of the 'Skip to Landmarks and Headings' browser extension for Chrome and Firefox, which constructs and displays a menu that provides keyboard access to the landmark regions and headings on a web page.

Developed using Web Components and WebExtensions APIs. [Chrome version](#), [Firefox version](#)

Lead designer and developer of CKEditor plugins in JavaScript for the 'A11yFirst' Project, including the 'Heading/Paragraph', 'Image', 'Link', 'Character Style' and 'A11yFirst Help' plugins, which are available at [CKEditor Add-ons](#).

Lead designer and contributing developer of 'AInspector WCAG', a Firefox browser add-on that provides web accessibility evaluation based on WCAG 2.0 requirements, available at [Firefox Browser Add-ons](#).

Lead designer and developer, in conjunction with Pixa, of the 'Accessibility Bookmarklets', web accessibility visualization tools compatible with all major browsers, available at [Accessibility Bookmarklets](#).

Lead designer and contributing developer of the 'Functional Accessibility Evaluator' (FAE), a Django/Python web application that analyzes the accessibility of websites, available at [Run FAE](#).

Interaction Design Consultant, Web UI, Chicago, IL — 1999–2005

As principal of Web UI, Inc., provided software design and development services with an emphasis on human-computer interaction design and web application development for Fortune 500 clients, including ABN AMRO, Accenture, Allstate Insurance, DeVry University, Fidelity Investments, HOLT Value Associates and the Illinois Institute of Technology.

User Interface Designer & Developer, Fidelity Investments, Marlboro, MA — 1997–1999

Served as principal interaction designer in the redesign of 'NetBenefits', a web application providing retirement savings account access to over one million customers. Improved the user experience through contextual inquiry, task flow analysis and usability testing.

According to an article published in the New York Times, in the year following the deployment of the new design of 'NetBenefits', the number of retirement savings account customer service calls was reduced by 50 percent compared to the previous year.

Designed and developed retirement investing tools for 401k.com, Fidelity's website for institutional investors. Tools included the 'Contribution Calculator', 'Withdrawal Calculator' and 'Take Home Pay Calculator'.

Senior Software Engineer & User Interface Designer, BGS Systems, Waltham, MA — 1991–1997

Responsible for X Window/Motif user interface design and C/C++ development of capacity planning and performance analysis products on Unix and VMS platforms. Investigated the feasibility of using Java for migrating to platform-independent user interface development.

EDUCATION

University of Massachusetts Boston — BA in Computer Science with Distinction, Summa Cum Laude, 1991

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Harvard Extension School, Cambridge, MA — Introduction to Programming in Pascal, 1987–1988

Berklee College of Music, Boston, MA — Jazz Composition & Arranging major, 1981–1984

University of Illinois at Urbana-Champaign — courses in psychology and philosophy, 1967–1970

SKILLS

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 Visio.

Front End Development

Modern JavaScript (ES6 and later), HTML, CSS, DOM scripting, WCAG & accessibility, responsive design, web components (custom elements v1), Chrome and Firefox browser extensions, WebExtensions API, experience with React.

Web Development

Django, Python, NodeJS, npm, Babel, Webpack, Gulp, XML/XSLT, Java, SQL, C/C++.

Usability Analysis and Testing

Creation of interactive prototypes, task lists and surveys for testing; facilitation of discount and lab-based usability testing; quantitative and qualitative analysis of test results.

User Research & Information Architecture

Field observations, contextual interviews, user role- and task-modeling workshops, card sorting exercises, paper prototyping.

CONTACT INFO

[LinkedIn Profile](#) — Additional details available upon request