

# Nicole H Brennan, BCCS

Board-Certified Cognitive Specialist | Senior UX Designer | AI & Human Interaction | Accessibility Specialist  
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## PROFESSIONAL SUMMARY

Senior UX designer and Board-Certified Cognitive Specialist with 20 years designing inside complex, high-stakes systems—federal civic infrastructure, experimental AI platforms, and decentralized identity. I work at the intersection of human behavior, system architecture, and public interest: shaping not just how things look, but how they work, what they disclose, and who they include. My recent work at Harvard's Applied Social Media Lab includes building original AI behavioral research infrastructure, leading product design for a decentralized identity system, and designing deliberative AI platforms for live civic use. I treat accessibility and cognitive inclusion as structural design requirements, and I bring a systems thinker's mind to every layer of a product—from information architecture and consent flow logic to evaluation frameworks and interaction patterns.

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## TECHNICAL SKILLS

Figma, Adobe XD, Illustrator, InDesign, Photoshop, USWDS, HTML/CSS, Drupal, GA4, Crazy Egg, GitHub, JIRA, Mural, Notion, Replit, AWS, Cloud.gov, OpenAI, Claude Code, Gemini, A/B testing, eye tracking, data visualization, mobile (iOS/Android)

## CORE COMPETENCIES

Human-centered & AI interaction design, behavior-driven product strategy, accessibility & inclusive design (WCAG 2.1, Section 508, cognitive), ethical design principles, UX research & data analysis, scalable design systems (USWDS), brand strategy & visual identity, agile collaboration, cross-functional leadership, mentorship & training, multilingual support

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## EXPERIENCE

### Senior UX Designer – Harvard University's Applied Social Media Lab at the Berkman Klein Center

*Aug 2025 – Present*

Own the design function for a public-interest research lab building experimental social media and AI-driven systems—translating complex academic, civic, and technical goals into usable, ethical, human experiences.

- Conceived and built the Personality Lab, a behavioral measurement and evaluation framework for AI personas in deliberative research environments — defining a five-axis configuration system, designing the evaluation infrastructure for testing persona consistency, and extending it with Replay Lab, a side-by-side transcript analysis tool that makes behavioral difference between personas legible, comparable, and researchable.
  - Led product design for Keyring, ASML's decentralized digital identity system (featured in the Harvard Gazette) — shaping information architecture, trust and consent flow logic, error state behavior, and the mental models users need to navigate verifiable credentials and DIDs safely. Made a technically complex, high-stakes system feel coherent and trustworthy without oversimplifying what users need to actually understand.
  - Drove a full redesign of NextSpace, the lab's AI-facilitated event platform — rearchitecting interaction flows, participation structures, and the human-AI handoff patterns that govern how users engage with AI assistance during live deliberative events.
  - Serve as the lab's design authority on human-AI interaction: defining how AI behavior is disclosed, how user agency is preserved, and how trust is built structurally into AI-mediated systems — not retrofitted at the interface layer.
  - Built ASML's design and brand system from inception, establishing design tokens, accessibility standards, and component architecture within a scalable, Figma-native system.
  - Embed cognitive accessibility and inclusive participation as structural design requirements across all initiatives, with particular attention to high-context civic and research environments.
  - Lead applied UX research including usability testing and live-environment feedback loops, using findings to pressure-test both interaction patterns and underlying product assumptions.
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## Lead Product Designer – U.S. General Services Administration

Nov 2022 – June 2025

Led inclusive digital product design across federal civic platforms—Search.gov, Vote.gov, and USA.gov—serving 100M+ users annually. Recipient of the Service to the Citizen Award for advancing equitable access to government services.

- Directed the full redesign of USA.gov, achieving a 91.6% accessibility score in the first week of launch.
- Shaped the Life Events and Benefits information architecture for USA.gov, designing pathways that helped people identify and access the services they needed during some of the most vulnerable moments of their lives — balancing policy complexity, multilingual needs, and cognitive load across a high-stakes, multi-channel experience.
- Contributed to the migration of Benefits.gov into USA.gov, consolidating the federal benefits discovery experience into a single accessible destination; nominated as part of the group for a second Service to the Citizen Award.
- Established scalable Figma design systems with reusable components, accessible color palettes, and WCAG 2.1 compliance, implemented across Drupal CMS and cloud infrastructure (Cloud.gov, AWS).
- Conducted generative and evaluative UX research, including studies with assistive technology users (screen readers, keyboard-only navigation), informing design decisions adopted across agencies.
- Applied data-driven optimization using GA4, heatmaps, and A/B testing to reduce task completion time by 25%, increase productivity by 20%, and grow USA.gov traffic by 68%.
- Co-led a Cloud.gov migration project projected to save \$600K annually while improving platform performance, uptime, and security.
- Delivered national talks and workshops on accessibility, neurodiversity, and inclusive design; mentored U.S. Digital Corps fellows and early-career designers across federal agencies.
- Led the UX strategy and early product management for the Search.gov 2.0 rebuild—co-authoring the pivot documentation that made the case for modernization to SES-level leadership, serving as informal product lead during initiative launch, and authoring the formal Risk Management Plan covering technical, security, operational, and compliance risk across a platform serving 2,200+ federal websites spanning one third of federal domains.
- Redesigned Search.gov's admin interface, results display, and indexing configuration UX for dual audiences — the federal agencies managing the platform and the public users relying on it.

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## Senior Product Designer – Cascades Technologies / GSA

June 2020 – Nov 2022

Contractor embedded within GSA's civic platform teams during the initial modernization of USA.gov and Vote.gov—conducting foundational research, establishing design patterns, and building the groundwork that the later redesigns were built on.

- Initiated the generative research and early design work for the USA.gov and Vote.gov redesigns, establishing the information architecture foundations and USWDS-based design patterns that carried through to launch.
- Designed accessible data visualizations and dashboards using GA4 and Crazy Egg, translating complex behavioral data into product and content decisions.
- Created a public-facing COVID-19 data story for USAGov, making the search behavior of 100M+ users legible to a general audience through narrative visualization.
- Collaborated cross-functionally with engineers and stakeholders on content workflow improvements and usability iteration across civic platforms.

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## Lead Product Designer – ICF

Feb 2018 – Mar 2020

Led product and UX design for energy conservation tools and personalized customer communications within ICF's behavioral science practice—applying social norming, loss framing, and persuasion architecture with a prosocial goal: designing systems intended to measurably shift consumer energy behavior toward efficiency and sustainability at scale.

- Designed real-time data visualization interfaces for energy conservation tools that helped users understand their consumption patterns and act on them—grounded in behavioral economics principles rather than surface-level engagement metrics.
- Engineered a scalable variable data personalization system for Home Energy Reports serving clients including PSO and Georgia Power—self-taught in InDesign data merge after vendors declined to share their process, producing fully customizable reports deployable across millions of users.

- Applied omnichannel behavioral design across print, digital, and direct communications, translating behavioral science research into product experiences that shifted energy habits measurably.
  - Led UX and product design for a consumer-facing energy portal providing real-time usage data and personalized conservation recommendations—bringing the behavioral insights from the Home Energy Reports into an interactive, always-on digital experience.
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## Earlier Experience—Product Design, Education & Cognitive Practice

2005 – 2022

Across two decades of parallel practice in product design, education, and cognitive systems, the through-line has been consistent: designing for how people actually think, learn, and function under real conditions—not ideal ones.

- Product & Systems Design
    - Early product work included high-stakes operational interfaces for defense and government clients at BMT International, including the Independent Remote Monitoring System (IRMS) safety dashboard (transforming complex real-time sensor data into actionable operational displays for the US Navy and Coast Guard), developed a touchscreen authentication system, and the Whale Wheel, an interactive physical educational product. This work established an early practice of designing for risk, attention, and decision-making under pressure—a thread that runs through everything since. At Matrix Group, delivered award-winning digital experiences for clients including Goodwill International and the National Parks Foundation, earning 9 industry awards for UX/UI and responsive design. Consulting work spanned fintech (USAlliance), nonprofit brand and digital systems, and long-term educational platform design with Connections Academy/Pearson Education.
  - Curriculum, Learning Systems & Cognitive Practice
    - Founded and co-led a cooperative learning program for working families and neurodiverse students, designing and delivering curriculum across subjects with particular attention to cognitive accessibility and individualized learning structures. Designed interactive training simulations and safety modules for military programs, translating high-stakes procedural knowledge into learnable, cognitively accessible formats. Wrote and taught courses on neurodiversity and assistive technology usability for federal government audiences. Taught UX and product design to emerging designers across academic and professional contexts—consistently bringing a cognitive specialist's lens to how design knowledge is structured and transferred.
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## PUBLIC SPEAKING & MENTORSHIP

- Co-presented at CSUN Assistive Technology Conference 2026—the premier national conference on assistive technology – leading two sections on neurodiverse inclusion and conversational AI, including a live demonstration of NextSpace/Berkie, and authoring the post-conference impact report for Harvard's Applied Social Media Lab.
  - Delivered accessibility training and inclusive design curriculum through GSA Online University, scaling best practices across federal agencies; presented national workshops and keynotes on neurodiversity and inclusive design to 600+ attendees across 15+ federal agencies, with sessions opened by the GSA Deputy Administrator.
  - Led design and outreach for GSA's assistive technology accessibility research, engaging 18K+ participants across federal agencies.
  - Lead product introductions and training at Harvard's Applied Social Media Lab, onboarding researchers and participants onto experimental AI-mediated platforms including NextSpace.
  - Mentored 6+ early-career designers and U.S. Digital Corps fellows on accessibility-first product design.
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## CERTIFICATIONS & TRAINING

- Board-Certified Cognitive Specialist (BCCS), IBCCES—credentialing in cognitive differences, learning profiles, and neurodiversity across educational and professional contexts
- UX Management & UI Certifications, Nielsen Norman Group
- Product Management Certification, Cornell University
- Foundations in Public Service Leadership, Partnership for Public Service
- AI & Machine Learning – Ethical AI, Risk Management, Data Science; Google AI Essentials; Responsible AI with Google Cloud; Machine Learning Foundations
- Google Data Analytics Certification