

NISHAD ANIL PATNE

Design Engineer | AI Products · Design Systems · Agentic Workflows

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Design engineer with 5 years shipping AI products and research software end to end, from user research to production front end and release. Leads design at ASU's Learning Engineering Institute across products backed by \$6.5M+ in federal research funding; manages distribution of LEI research software to 5,000+ researchers at ~3,000 institutions, including Google, Microsoft, Meta and Duolingo. Builds design systems, agentic AI workflows and design-to-code pipeline that engineers estimate doubled build speed. Ex-Deloitte (Big Four); co-author on 2 published papers.

Experience

Design Engineer & Design Lead (UX Designer)

Feb 2023 – Present

Learning Engineering Institute, Arizona State University

Tempe, Arizona

Part-Time: Feb 2023 – May 2024 | Full-Time: June 2024 – Present

- **Built and lead institute's design function from scratch:** grew it from sole designer to team of 4; set design direction, standards and quality bar across LEI's AI tools, research software and learning platforms; mentored 15+ designers and engineers, helped hire 3, and named and branded LEI's internship program (LEXI, 18 interns across 2 cohorts).
- **Designed, engineered and shipped research-grade NLP desktop application** (WAT Researcher) analyzing writing across 3,000+ linguistic features and handling 50,000-text corpora fully offline; free alternative to commercial text-analysis APIs priced at \$1,000/month.
 - **Successor to Coh-Metrix, built for its 5,000+ researchers across ~3,000 institutions**, including Google, Microsoft, Meta, Duolingo, Pearson and ETS; manage software distribution to this base.
 - **Led economical architecture pivot from server-bound web app to offline desktop app** when server scaling stalled under tight lab resources; owned UX, front end, application layer and packaging (Angular, TypeScript, Python, SQLite, Electron, PyInstaller).
 - **Shipped free public release for Windows and macOS** (July 2026), adopted by LEI research teams for active studies; desktop UI became foundation of hosted web version.
- **Lead design for \$3.75M IES-funded AI assessment platform** (Requesta) that generates multiple-choice questions from course materials through hybrid multi-agent LLM pipeline; flagship tool in ASU's Learning Design Suite under ASU's AI Presidential Priorities, with ASU-wide launch planned.
 - **Led UI requirements and alignment across 9-person software design and engineering team**, researchers and stakeholders, turning formal SRS into flow model that anchored scope and edge cases.
 - **Re-architected IA into panel-based workspace**; delivered AI prototype within one week so usability testing ran in parallel with 30-page high-fidelity design for desktop, tablet and phone.
 - **Drove fixes for 80% of findings (40 of 50) from 16-faculty usability study**, including agent-transparency view that exposes each AI agent's reasoning to build user trust.
- **Built design-system and design-to-code infrastructure:** authored ASU-branded Tailwind token layer now in production; directed Figma-to-code pipeline (Code Connect, centralized design tokens and UX copy, Figma API, MCP) that engineering team estimates **doubled build speed**.
- **Led design of AI-evaluation platform** (AI-X Framework) helping ASU faculty and staff assess AI tools against research-backed pedagogical and ethical criteria: took it from concept to live release, directing design team; showcased at LERN Convention and FOLC Fest.
- **Led end-to-end client engagement for ASU's Principled Innovation team** (PI Card Deck): scoped, specified and designed bilingual (EN/ES) web and mobile app, built with AI agents over 10 two-week sprints and delivered on schedule; **shipped 4 decks against 3-deck contract**, built to WCAG 2.2 AA; free to ASU's 158,000+ students and 21,000+ employees, where printed decks sell for \$30–\$40.
- **Pioneered agentic video production at LEI:** conceived and built filmmaking system (LIVE) that turns written direction into production-ready video through coding agents; produced 8 films; open-sourced workspace (MIT) now used by several LEI research teams; demoed at 2 ASU AI Day events.
- **Co-lead developer of AI-native learning companion** (ARCHIE): multi-agent harness with learner-owned memory, built to strengthen learner agency; own design, UX and experimental code; co-mentor 3 interns.

- **Led design of \$1.4M IES-funded writing-feedback platform** (WAT Classroom): turned raw NLP metrics into feedback teachers and students act on through rubric builder, bipolar scales and radar charts; co-authored 2 published papers on toolkit.
- **Led design of \$1.4M IES-funded reading-tutor platform for grades 3–5** (iSTART Early): designed teacher and student portals and their design system; built 3 learning games and 5 lessons; validated with 18 users across 2 usability rounds.

Front-End Developer (Business Technology Analyst)

Deloitte

Jan 2021 – May 2022

Pune, India

- **Built citizen-facing application flows for Kentucky's statewide benefits portal** (kynect, Salesforce), with conditional logic and dynamic validation across citizen and authorized-user workflows.
- **Modernized legacy front end single-handedly**: migrated 9 pages and 4 workflows from Aura to Lightning Web Components, rewriting JavaScript logic and API integrations; shipped 4+ new pages.
- **Drove accessibility remediation and translation across high-stakes public portal** (WCAG, JAWS, Compliance Sheriff) in team of 4; owned smoke, integration and acceptance testing across releases.

Projects

ToolTips, Figma Plugin

Nov 2023

- **Built Figma plugin with 6,800+ users** that automates tooltip creation for designers (TypeScript, Figma Plugin API); 400+ saves on Figma Community, still growing without updates.

PlainSight, Steganography Engine

Mar 2026

- **Engineered image-steganography engine in one day** for Figma Makeathon 2026: hides data in image hue with Hamming(7,4) error correction, powering invisible signatures, hidden payloads and visual QR codes; live.

Skills

- **Design**: product design, interaction design, UX strategy, information architecture, design systems, design tokens, prototyping, data visualization, accessibility (WCAG 2.2 AA), branding
- **Engineering**: TypeScript, JavaScript, React, Next.js, Angular, Tailwind CSS, HTML, CSS/SCSS, Python, SQLite, Electron, PyInstaller, Salesforce LWC, Git
- **AI**: agentic coding (Claude Code, Codex), multi-agent systems, LLM orchestration, MCP, RAG (embeddings, vector databases), Remotion
- **Research**: moderated usability testing, focus groups, surveys, heuristic evaluation, A/B testing, IRB-certified (CITI)
- **Tools**: Figma, Figma Make, Code Connect, Articulate Storyline 360, GitHub, Asana, Jira, Miro

Publications

- Potter, Serhan, **Patne** et al. (2026). Human-AI collaboration for qualitative analysis in participatory design: Refining the Writing Analytics Tool. *Journal of Educational Data Mining*, 18, 113–155.
- McNamara, Potter, Serhan, Singh, **Patne** et al. (2026). The Writing Analytics Tool: A Learning Engineering Approach to Designing AI-Supported Writing Instruction. *LERN 2026*.

Education

Master of Science, User Experience (Human Computer Interaction)

Arizona State University

Aug 2022 – May 2024

Tempe, Arizona

Bachelor of Technology, Electronics Engineering

Veermata Jijabai Technological Institute

Aug 2016 – Sep 2020

Mumbai, India