

Stefan Kovalik

Designer Engineer · Creator of Perception-First Design™

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aurochs.agency · cognograph.app · github.com/skovalik · linkedin.com/in/kovalik

Designer-engineer with 15 years across consumer brands, startups, and my own agency. Created Perception-First Design, an open-source design tool grounded in cognitive psychology. Currently shipping Cognograph, a spatial AI canvas with four USPTO provisional patents.

Design focus: cognitive psychology applied to creative tools and visual-authoring environments; spatial substrates for AI-augmented creative work; brand systems that compound from marketing surface to product UI.

SELECTED WORK

Cognograph

Spatial AI workflow canvas · brand to runtime · solo build · cognograph.app · github.com/skovalik/cognograph

Sole designer and engineer. Electron + React + TypeScript + React Flow + Three.js. Spatial context engineering: node-graph traversal feeds connected nodes into AI prompts. Provider-agnostic runtime: bring-your-own-key, any OpenAI-compatible endpoint or local model. Real-time multiplayer (Y.js CRDTs) planned. AGPL-3.0 with Defensive Patent Pledge. Shipped solo: spatial UI primitives, GLSL-shader rendering pipeline, design system, brand, marketing site, waitlist.

Four provisional patent applications filed with USPTO February 2026, covering spatial context injection via graph traversal, node-based AI orchestration, spatial triggers and templates, and plan-preview-apply workflows with atomic materialization.

Perception-First Design

Open-source design tool grounded in cognitive psychology · github.com/skovalik/perception-first-design

People decide in 50 milliseconds. Changes design conversations from opinions to diagnosis. Names which perceptual layer is failing on any design, pitch, or system before anyone touches a pixel. Built on ~100 peer-reviewed citations across Lavie, Damasio, LeDoux, Sweller, and Lang. Open-source (CC BY-SA 4.0 + MIT), shipping as a Claude Code skill. v3.6.

SELECTED WRITING

- ***Make Me Think: Perception-First Design for the Post-Usability Era.*** Perception is upstream of cognition. 12-chapter counterpoint to Krug's *Don't Make Me Think*. Free PDF and EPUB. aurochs.agency/writing/make-me-think
- ***The Multiplier.*** 108-day audit of solo AI-augmented output with method, math, and confounders disclosed. aurochs.agency/writing/notes/multiplier
- ***You Wouldn't Vibe Code a Car.*** Video costs 10x the cognitive load of memes for the same information. Facebook paid \$40M for inflating video metrics 150 to 900%. METR: AI users feel 20% faster while being 19% slower. 3,800 words on cognitive economics. aurochs.agency/writing/notes/you-wouldnt-vibe-code-a-car

EXPERIENCE

Aurochs · San Francisco, CA · October 2025 – Present

Founder & Designer Engineer · aurochs.agency

- Sole design and engineering function for Cognograph and Perception-First Design (above): brand, marketing site, product UI, runtime.
- For client work: full-stack web builds, brand systems, and launch packages. Built and run VacuumSealersUnlimited.com; 63ms TTFB; the platform powered fourfold revenue growth over ten years to \$5M+ annual.
- Run production infrastructure for client sites: Cloudflare Pages and Workers, headless content workflows, server hardening, security audits, incident response for live commerce systems.

Simply Smart Home · Dublin, CA · October 2019 – December 2024

Director of Digital Design (Jun 2022 – Dec 2024) · Lead Product Designer (Oct 2019 – Jun 2022) · mysimplysmarthome.com

- Sole design and engineering lead across brand identity, packaging, retail materials, mobile app, e-commerce UI, and marketing. One continuous design system from marketing surface to product.
- Built a 3D product visualization library using virtual photography, replacing physical photo shoots for marketing, packaging, and retail materials. Designed and developed the e-commerce platform from scratch.
- 233% sales increase; revenue grew from \$1.5M to \$5M. DTC channel grew from <2% to 15% of revenue. Retail placement at Costco, Walmart, Target, Amazon, Home Depot, and Lowe's; Disney licensing deal.

QTBIPOC Design · August 2020 – Present (Part-time advisory)

Technology Director / Brand Strategist · 501(c)(3) nonprofit · qtbipoc.design

- Founding member and Technology Director; co-host and organizer of the Creative Chats event series; built the first corporate website; trained five junior designers across initial cohorts.

The iO Theater · Chicago, IL · 2016–2019, 2023–2024

Website Designer & Contractor · ioimprov.com

- Redesigned the venue's site across two ownership transitions. SEO overhaul drove 20% organic traffic increase; Ticketfly POS integration grew online ticket sales from 50% to 75%.

Tantum Technologies · Dublin, CA · June 2010 – April 2015

Co-founder & Website Designer

- Co-founded an agency at 23. Sole design function for 15+ startup ventures backed by Shark Tank's Barbara Corcoran. Delivered websites, branding, and marketing to broadcast timelines.
- Built and operated POS-integrated commerce platforms; engineered for broadcast-driven traffic spikes (120K unique visitors within 10 minutes).

EDUCATION

University of California, Santa Barbara · 2011

B.A. Psychology · Focus: cognitive psychology, human behavior, decision-making.

TECHNICAL SKILLS

Design systems	Brand identity, UI/UX, interaction design, information architecture, prototyping, design tokens, component libraries, motion design, 3D product visualization.
Frontend	React, Zustand, React Flow, TypeScript, CSS (vanilla custom properties, Tailwind, CSS Modules, container queries, OKLCH). Testing: Playwright + custom scripts. Accessibility: axe-core, Lighthouse a11y, screen reader testing, manual ARIA.
3D & real-time	Three.js, WebGL, GLSL shaders, Substance 3D, Electron, particle systems, post-processing pipelines.
Backend & infra	Node + Python scripts, WordPress/WooCommerce, MySQL, custom CMS. Cloudflare (Pages, Workers, R2, DNS), Supabase. CI/CD: GitHub Actions, Cloudflare Pages git deploys, Fly.io for Python services. Custom Python SSG (htpy + Pydantic + Starlette).
AI / agentic tooling	Claude Code (daily user), Anthropic Agent SDK, MCP, plugin and skill authoring, prompt engineering, evals.
Methodology	Perception-First Design™ (creator). 5-layer diagnostic framework grounded in cognitive psychology. Applied to any design problem or surface area.
Strategy	User research, A/B testing. Analytics: Cloudflare Web Analytics, Google Analytics, Microsoft Clarity, custom instrumentation.
Tools	Adobe Creative Suite (Photoshop, Illustrator, InDesign, After Effects), Figma, Notion, Jira.
Languages	English, Spanish (conversational).
Citizenship	United States.