

ALEJANDRO UGALDE

Senior Frontend Architect · Web 3D & Real-Time Rendering

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SUMMARY

Senior Frontend Architect with 18+ years of experience and a 14-year record of consecutive promotions at MasterBrand Cabinets (NYSE: MBC), North America's largest cabinet manufacturer. Specialist in real-time web 3D for real, buildable products: conceived and led Rebode's Kitchen Visualizer (Vision) — sole architect of its Three.js/React Three Fiber rendering engine — and architected the 3D product configurators on Lowe's and The Home Depot digital channels. Co-developed a parametric system generating production cabinet geometry directly from live catalog data, eliminating per-SKU 3D assets and cutting load times by roughly an order of magnitude. Owned the full 3D asset workflow: glTF/Draco/KTX2 optimization, post-processing, mobile performance budgets. Rated “Breakthrough Year” (top company rating) in final review, shipping zero P0/P1 defects across 2024.

SKILLS

- **3D & Graphics:** Three.js, React Three Fiber, Drei, WebGL, glTF/Draco/KTX2 asset optimization, post-processing pipelines, parametric 3D systems, mobile 3D performance, Fusion 360
- **Frontend:** TypeScript, JavaScript (ES6+), React, Next.js, Zustand, TanStack Query, Vue.js, Angular, Node.js, HTML5, CSS3, Tailwind CSS, Chakra UI, styled-components, responsive/mobile-first architecture
- **Architecture & DevOps:** design systems, component libraries, Web Components, monorepos (Turborepo), Storybook, CI/CD, Azure DevOps (Pipelines, Repos, Artifacts), Azure App Service, Docker, Git/GitFlow, npm package publishing
- **Testing:** Jest/Vitest, Playwright
- **Backend & Data:** Node.js REST APIs, GraphQL, web scraping/data services
- **Design & UX:** UI/UX design, Figma (variables, dev handoff), Adobe Creative Cloud, design-to-code workflows
- **Practices:** Agile/Scrum, Amplitude (feature flags, A/B testing, Session Replay), headless CMS (Kontent.ai), performance optimization (Lighthouse/Core Web Vitals), SEO, Google Analytics/Tag Manager, ecommerce (Shopify, Amazon, Etsy, eBay)

EXPERIENCE

MasterBrand Cabinets, Inc. — Remote / Weslaco, TX · 2012–2026

Joined via WoodCrafters Home Products (acquired by MasterBrand, June 2013). Promoted five times over 14 years; final role on Rebode (rebode.us), MasterBrand's digital-services venture.

Senior Frontend Architect · 2024–2026

- Conceived and pitched Vision (rebode.us/vision), Rebode's 3D kitchen visualizer — built the proof-of-concept that became a MasterBrand key initiative, then led development as sole architect of its Three.js rendering engine, asset pipeline, and state architecture through high-fidelity production release.
- Conceived and implemented a Full Parametric Cabinet System generating 3D product geometry programmatically, eliminating manual 3D asset creation, curation, and storage costs — saving hundreds of engineering hours.
- Key contributor to the launch of Rebode (rebode.us): internal preview and V1 public releases shipped on schedule, with zero P0/P1 defects and a 90%+ sprint say/do ratio across 2024.
- Owned frontend delivery and experimentation for Try On Your Style, Rebode's production generative-AI feature (a multi-agent Gemini pipeline re-renders an uploaded kitchen photo in the user's selected style): refactored the React component, ran the A/B rollout via Amplitude feature flags, and contributed evaluation ideas to the ML team's pipeline in Google AI Studio.
- Architected and developed the Rebode blog (rebode.us/blog) end-to-end on the Kontent.ai headless CMS — shipped on a sub-two-month deadline, designed ~90% of its UI, and trained the content team to publish independently; fewest fix requests of any Rebode property.

- Owned core Jumpstarter steps end to end (Style Quiz, Design Questionnaire, Budget engine with regional ZIP-based estimation) on jumpstarter.rebode.us, and extended the Rebode homepage with Amplitude feature flags, A/B testing, and CMS image optimization.
- Architected Universal Components, Rebode's design system, from the ground up as sole contributor at launch; owned the technical roadmap adopted by all product teams.
- Co-built CI/CD pipelines (Azure DevOps, Docker, Next.js, npm component publishing) with the infrastructure team, standardizing release cycles and reducing deployment failures; drove GitFlow adoption across major repositories.
- Built Jumpstarter's dealer-locator map experience (territory-zone logic, custom markers and rendering) and eliminated ~\$10k/month in Google Maps API costs with a first-visit geolocation-caching strategy.
- Drove mobile-first standards and design-to-code workflows with the UX team (Figma variables, component annotations), sharply reducing design handoff friction.
- Earned "Breakthrough Year," the company's top performance rating, with a formal recommendation for promotion.

Web Architect · 2020–2024

- Owned and enhanced the Home Depot and Lowe's 3D configurators, shipping new features while maintaining production quality across releases.
- Migrated both visualizer applications from Linux-based servers to Azure App Service.
- Contributed weekly, actionable analysis to the CX and Website Performance management boards, monitoring key metrics across brand sites.
- Managed and mentored up to two direct reports — including an engineer I trained and grew who succeeded me as lead developer of both retail configurators and now leads Vision's 3D development.

Senior Frontend Engineer · 2017–2020

- Designed and developed Vanity Selections, the 3D product configurator for The Home Depot digital channel (live at vanityselections.homedepot.com) — among the first 3D product configurators in the home-improvement category.
- Built the Diamond vanity configurator for the Lowe's channel (live at diamondvanityconfigurator.com), expanding retail channel presence and physical-store market share for MasterBrand brands.
- Converted the legacy Flash top configurator on stpaul.homedepot.com to HTML5, preserving a key retail sales channel.

Digital Projects Manager · 2014–2017

- Managed customer-facing and internal web applications end-to-end: development, UX/UI design, QA, and ongoing maintenance; produced photography, video, and graphic design for digital channels.

Webmaster (WoodCrafters Home Products) · 2012–2014

- Redesigned and developed the corporate website; promoted to management within two years based on results.

Quetzal Studio — Founder · 2017–Present

- Built and operate a personalized-products ecommerce business end-to-end: product design and 3D modeling, Shopify store development (quetzal.store), analytics-driven marketing, and multi-channel sales across Shopify, Amazon, Etsy, and eBay — growing sales 50%+ year-over-year in the company's first years.

Earlier Experience

- **Marketing Manager, Integra Medical Center** · 2010–2012 — designed and developed the corporate website; built the patient-acquisition marketing strategy; managed Google Ads.
- **Editor & Founder, Über Magazine** · 2008–2010 — launched and ran a profitable ad-supported publication; brand identity, production, web presence.

EDUCATION

BBA, Marketing — University of Texas–Pan American · 2006

LANGUAGES

English (native) · Spanish (native) · French (basic)