

## **JULIAN HARDEE**

Full-Stack Product Engineer

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## **PROFESSIONAL SUMMARY**

**Full-Stack Product Engineer and Systems Architect** with 10 years of professional experience operating at the intersection of software engineering and user experience design. Expert at bridging the gap between high-fidelity Figma prototypes and rigorous technical logic, with a proven ability to translate complex mockups into pixel-perfect, production-quality code. Specialist in architecting scalable Design Systems and reusable component libraries that enforce brand consistency and WCAG 2.1 Accessibility across high-concurrency applications.

## **TECHNICAL SKILLS**

### **Architecture & Backend**

- **Languages & Runtimes:** Node.js, TypeScript (Strict), WebAssembly (Rust).
- **Data & Infrastructure:** PostgreSQL, Drizzle ORM, Neon Serverless, Database Triggers, Connection Pooling, Redis-based Rate Limiting.
- **Cloud & DevOps:** Vercel Edge Functions, Edge Caching, CI/CD, PWA/Service Workers, API Cost Optimization.
- **Auth & Security:** Clerk, RBAC, OAuth, Session-based Auth, HTTP-only Cookies.

### **Frontend & Design Engineering**

- **Frameworks:** Astro 5, Next.js, React 18/19, Svelte.
- **Styling & UI:** Tailwind CSS, SCSS, shadcn/ui, Radix UI, Framer Motion, WebGL/Shaders.
- **Systems & Workflow:** Figma-to-Code Pipeline, Design Systems Architecture, State Management (Zustand, Context API).
- **Modern Standards:** WCAG 2.1 Accessibility, Responsive & Mobile-First Architecture, Web Standards.
- **Optimization:** Lighthouse 95+ Scoring, Lazy Loading, Image Optimization, Performance Auditing.

### **UX & Research:**

- Usability Testing, A/B Testing, UX Prototyping (Cursor), Information Architecture, Interactive Wireframing.

### **AI & LLM Orchestration:**

- **Machine Learning:** Natural Language Processing, AI Summarization, Predictive Analytics, Time-series Analysis
- **Data Visualization:** Umami Analytics, Recharts, Real-time Dashboards, Social Analytics
- **Multi-Provider Failover** (OpenAI, Anthropic, Gemini, Kimi)
- **Structured JSON Generation & Patching**
- **Prompt Engineering & Knowledge Injection**
- **Rate Limiting & Cost Orchestration** (Upstash/Redis)

- **Schema-First Generative UI** (Zod)
- **Certifications:** Data Science (BrainStation 2025), AI & Data Science (AAA Institute 2024)

#### **E-Commerce & Integrations:**

- **Shopify:** Liquid, Storefront API, Checkout Extensions, Shopify Functions (Rust/WebAssembly),
- **CMS:** Sanity, Tina, Headless Architecture
- **Third-Party:** Resend (Email), Bunny CDN, Slack API, WooCommerce, Klavayo

#### **Interactive Design Engineering:**

- **Design-to-Code Pipeline:** Expert at bridging high-fidelity Figma prototypes to production-grade Astro 5 and React environments; specialist in creating component libraries that preserve design intent while maintaining strict type safety.
- **Motion & Interaction:** Implementation of complex CSS/SCSS animations and custom dithering shaders (WebGL/Three.js) to create high-engagement visual "vibes" without compromising bundle size or performance.
- **Performance-First UI:** Optimization for 95+ Lighthouse scores through advanced PWA/Service Worker implementation, Edge Caching, and asset optimization (Adobe Creative Suite) to ensure instantaneous user feedback.
- **Visual Systems:** Architecting scalable Design Systems that enforce typographic hierarchy, brand consistency, and WCAG 2.1 Accessibility across large-scale, high-concurrency applications.

### **PROFESSIONAL EXPERIENCE**

#### **Full-Stack Product Engineer** | Times10 – Los Angeles, CA | Feb 2025 – Feb 2026

- **Asset Pipeline:** Managed high-fidelity visual assets and digital key art, ensuring pixel-perfect delivery across diverse device breakpoints and CMS platforms.
- **Brand Alignment:** Collaborated with stakeholders to translate broad marketing campaigns into interactive digital experiences for high-profile clients.
- **AI/ML Engineering:** Deploy AI-powered content summarization using NLP to automate client reporting workflows, reducing manual documentation overhead by 60%.
- **Database Design:** Engineer complex PostgreSQL schemas with Drizzle ORM, connection pooling, and automated migration pipelines for zero-downtime deployments.
- **Custom Commerce:** Develop Shopify Checkout Extensions using Rust/WebAssembly, implementing value-based BOGO logic (50% off second-most-expensive unit) that bypasses legacy Liquid constraints.
- **Third-Party Integrations:** Build Slack OAuth workflows, automated transactional email systems, and Bunny CDN file storage for scalable media handling.
- **Performance Optimization:** Achieve 95+ Lighthouse scores by replacing heavy tracking scripts with Umami and leveraging Astro's islands architecture and edge deployment.

#### **E-Commerce & Web Development Manager** | Hope Sews – Remote | Aug 2023 – Apr 2024

- **Frontend Strategy:** Directed frontend strategy and UX optimization for a global WooCommerce platform serving an international customer base.

- **Conversion Optimization:** Executed data-driven redesigns of checkout and product pages, utilizing A/B testing results to measurably increase conversion rates.
- **Global Performance:** Optimized platform performance via lazy loading, code splitting, and query optimization to ensure rapid global load times.
- **Compliance:** Enforced WCAG 2.1 standards, ensuring high-level accessibility and compliance across all digital touchpoints.

### WordPress Developer | DigitalAgency.Support | Mar 2020 – Aug 2023

- **Bespoke CMS Engineering:** Developed custom WordPress themes and reusable component libraries, translating high-fidelity Photoshop mockups into performant, high-traffic web applications.
- **Full-Stack Integration:** Engineered secure REST API connections and payment gateway integrations, bridging modern JavaScript frameworks with hardened WordPress environments.
- **E-commerce Infrastructure:** Scaled diverse e-commerce platforms through custom-built tools, ensuring seamless third-party data synchronization and optimized content delivery.

### Founding Engineer | Thoughtform Worldwide | 2017 – Present

#### Technical Leadership:

- Architect end-to-end product lifecycle from database schema design to Vercel edge deployment
- Implement secure payment gateways and third-party API integrations for diverse e-commerce clients
- Consult on growth strategy, scaling small businesses through performance tracking and conversion optimization
- Cross-Functional Collaboration: Acted as a primary technical and design liaison between product managers, copywriters, and stakeholders to execute marketing concepts from creative briefing to deployment.

### EDUCATION & CERTIFICATIONS

- Data Science Certificate – BrainStation | 2025
- AI & Data Science Certificate – AAA Institute | 2024

### FEATURED PRODUCTS:

- **Expansion Draft Simulator** ([www.expansiondraftsimulator.com](http://www.expansiondraftsimulator.com) | [GitHub](#))
  - **Simulation & State Architecture:** Architected a high-performance sports strategy engine using Astro 5 and TypeScript, managing complex, real-time synchronized states to track player protection, selection, and roster requirements across deep datasets.
  - **Algorithmic Rule Engine:** Developed custom logic to enforce league-specific constraints (eligibility, contract tiers, and service years), ensuring 100% accuracy in draft-legal simulations via Vercel Edge Functions.
  - **ETL & Data Normalization:** Engineered a robust data transformation pipeline to normalize fragmented sports API data and CSVs into a performant, relational PostgreSQL (Neon) schema, optimizing query speeds for high-concurrency user sessions.

- **Reactive UI Engineering:** Built an interactive draft interface using React 19, and Tailwind CSS 4 that delivers instant client-side responsiveness. The core draft engine runs entirely in the browser with real-time pool updates, undo/redo mechanics, and live roster grading—eliminating server round-trips for a seamless, zero-latency user experience.
  - **Traffic & Cost Orchestration:** Integrated Redis (Upstash) for advanced Rate Limiting and Request Throttling, mitigating "API Bankruptcy" and preventing system abuse while maintaining cost-predictability during high-traffic bursts.
- **AizuPass Event Management SaaS** ([aizupass.com](https://aizupass.com) | [GitHub](#))
  - **Multi-Model AI Orchestration:** Engineered a resilient AI gateway supporting OpenAI (GPT-4o-mini), Anthropic (Claude), Google (Gemini 2.0 Flash), and Moonshot (Kimi) with automatic provider failover and specialized system prompt caching.
  - **Generative UI Engine:** Developed a schema-first invite builder that translates natural language prompts into structured JSON trees, allowing for full-layout generation and targeted selection-scoped refinements via JSON patches.
  - **Context-Aware Knowledge System:** Built a RAG-lite "Wayfinding" assistant for event staff that dynamically builds system messages from real-time workspace navigation paths and organization-specific metadata, reducing administrative support friction.
  - **Robust API Infrastructure:** Implemented Zod-backed request validation and Redis-based rate limiting (30 req/min) to manage high-concurrency LLM calls while maintaining cost predictability and system stability.
  - **Access Control & Security:** Enforced strict Role-Based Access Control (RBAC) within the AI pipeline, ensuring that sensitive generative features and event data are restricted based on workspace-level permissions.
  - **Privacy-First Performance:** Designed a non-streaming, zero-latency check-in engine capable of handling rapid-fire scans via mobile devices, integrated with secure data handling for unique QR identifiers.
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- **Adidas x D. Rose Event Platform** (<https://www.chicagohomegrown.com/invitation> | [GitHub](#)): RSVP and registration system for Derrick Rose events featuring dual-flow guest management (players vs. non-players), jersey number validation, automated check-in, and CSV export functionality.
- **Adidas x D. Rose x Fear Of God RSVP Platform** ([drose-fog-rsvp-lp.vercel.app](https://drose-fog-rsvp-lp.vercel.app) | [GitHub](#)):
  - **Event Logic:** Built a specialized RSVP and guest management system featuring custom validation logic and automated check-in workflows for high-profile community events.
  - **Performance Scaling:** Leveraged serverless architecture to handle rapid spikes in registration traffic while maintaining strict WCAG 2.1 accessibility standards
- **Adidas NIL Athlete Tracker** ([Demo](#) | [GitHub](#)): Production PWA for managing Name/Image/Likeness athletes with real-time social analytics (Instagram/X/TikTok), time-series data processing, task management, and offline-first architecture via service

workers.

- **ANTA Brand Microsites**
  - **ANTA BHFA & Social Hour Run Club** ([anta-bhfa-microsite.vercel.app](https://anta-bhfa-microsite.vercel.app) | [anta-x-social-hour-run-club-landing.vercel.app](https://anta-x-social-hour-run-club-landing.vercel.app)): Developed bespoke interactive microsites for global footwear launches, bridging the gap between high-fidelity Figma designs and production-ready code.
  - **Interactive Engagement:** Implemented custom animation sequences and responsive layouts to maintain brand alignment across diverse device breakpoints.
- **Times10 Ecosystem & Capabilities**
  - **Agency Web 2025** ([times10.net](https://times10.net) | [GitHub](#)): Re-architected the core agency platform using Astro 5 and Vercel Edge functions, achieving 95+ Lighthouse scores through "islands" architecture and optimized asset delivery.
  - **10x Capes Deck** ([capabilities.times10.net](https://capabilities.times10.net) | [GitHub](#)): Engineered a high-fidelity digital capabilities presentation tool, utilizing React and Tailwind CSS to create a seamless, app-like experience for stakeholder pitches.
- **890 Capital** (<http://www.890capital.com>): End-to-end development of a premium financial services marketing website.
  - **Bespoke WordPress Engineering:** Developed a premium financial services platform using a custom-hardened WordPress environment, bridging high-fidelity design systems with performant HTML/CSS.
  - **Visual Storytelling:** Executed a sophisticated visual identity and interaction design, focusing on advanced typography and fluid layouts for institutional clients.
  - **UX Optimization:** Designed and deployed responsive user journeys, ensuring seamless cross-platform performance and strict adherence to modern web standards.
- **Thoughtform Worldwide** ([thoughtform.world](https://thoughtform.world) | [GitHub](#)): This is the marketing website for Thoughtform Worldwide, a development studio specializing in technical infrastructure for creators and brands. The site showcases an interactive 3D hand model that responds to user interaction, featuring:
  - Custom dithering shader for a distinctive visual aesthetic
  - Mouse-responsive animations with floating motion and proximity-based effects
  - Responsive design with mobile-optimized interaction patterns
- **InkBugMerch** ([inkbugmerch.com](https://inkbugmerch.com) | [GitHub](#)): E-commerce quote system with 100MB+ file uploads, Neon PostgreSQL, Resend email automation, and Bunny CDN storage for a screen-printing business.