

JOEL BANCHS

DESIGN ENGINEERING MANAGER · PRODUCT ENGINEERING ·
MANUFACTURING SYSTEMS · FULL-STACK DEVELOPMENT

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PROFESSIONAL SUMMARY

Design & Engineering Manager with 24+ years across ballistic/tactical product development, pattern and marker systems, production leadership, CAD/CNC automation, and full-stack operational platforms. Builds the bridge between manufacturing reality and digital execution.

SELECTED IMPACT

56→3 Engineering backlog reduction	90%→20% recurring product issue reduction
10h→<3h production process improvement	\$300K estimated first-year savings

EXPERIENCE

Design & Engineering Manager 2025–PRESENT
Slate Solutions · United States

- Strengthened product readiness through RAP, technical documentation, BOM/trim organization, marker quality improvements, and custom operations software.
- Aligned Engineering, Production, Quality, and Sales around clearer handoffs and manufacturability.

Full-Stack Developer & Client Projects 2022–2024
Independent / Client Work · United States

- Built web platforms, APIs, dashboards, PWAs, radio streaming systems, SEO improvements, and self-hosted infrastructure.
- Used software systems thinking to improve operational visibility and repeatable execution.

Production Manager / Engineering Manager 2021–2022
Manufacturing Leadership · United States

- Led production teams, improved output and cycle time, supported new product launches, and developed Excel/VBA/SQL reporting tools.

Pattern / Marker Maker & Cutting Room Manager 2000–2018
Apparel & Tactical Manufacturing · United States

- Digitized and verified patterns, created production markers, improved fabric yield, managed cutting room teams, and trained users on Accumark workflows.

PROJECTS

Readiness Approval Process Platform

ENGINEERING OPERATIONS / ERP / AI AUTOMATION

- Created a repeatable product readiness workflow connecting Engineering, Production, Quality, Sales, and Manufacturing execution.
- Improved visibility across product documentation, BOMs, trim lists, marker development, cutting operations, and production support.
- Helped reduce engineering backlog from 56 to 3 while improving cross-functional handoffs and production readiness.
- Supported estimated first-year savings of \$300K through better engineering structure and operational visibility.

Engineering + Production Integration Application

SQL / DASHBOARDS / PRODUCTION TRACKING

- Built a custom operational platform to connect ERP data, engineering tasks, marker development, cutting operations, and production status.
- Converted manual tracking processes into structured digital workflows for faster decision-making.
- Improved visibility for open, closed, and in-process work across production and engineering teams.
- Supported data-driven execution by centralizing operational information into a more usable system.

Sinai Radio Project

PROXMOX / DOCKER / AZURACAST / WORDPRESS / PWA / REACT NATIVE

- Configured and maintained a Linux-based Proxmox server for hosting application services, databases, and radio infrastructure.
- Deployed a Docker-based AzuraCast radio streaming platform with live streaming and autoplayer support for 24/7 operation.
- Enhanced server security using Cloudflare to protect services from external threats and unauthorized access.
- Built a responsive website using WordPress, Elementor, HTML, CSS, JavaScript, and Bootstrap.
- Developed a custom JavaScript radio player for real-time audio playback across browsers.
- Converted the website into a PWA and later into a mobile app using React Native and Expo.

Twins V&A Cleaning Services Website

BRANDING / HTML / CSS / BOOTSTRAP / API INTEGRATION

- Designed a distinctive company logo and visual identity to strengthen brand recognition.
- Built a responsive business website using HTML, CSS, and Bootstrap, hosted on a self-managed server.
- Configured Cloudflare security and performance protection for the website.
- Created a custom API integration to route direct messaging between Telegram and email services.
- Implemented SEO improvements to increase visibility and organic traffic.

Golden Capital Project

BRAND DESIGN / MARKETING GRAPHICS / VIDEO PRODUCTION

- Created promotional materials and marketing graphics using Adobe Photoshop and Illustrator.
- Produced and edited marketing videos using Adobe Premiere, After Effects, and Audition.
- Improved brand visibility through digital and print-ready creative assets.
- Managed multiple creative deliverables while aligning design output with client expectations.

Trading Bot Creation

MQL4 / MT4 / TRADING AUTOMATION

- Developed trading bots using MQL4 to automate trade execution on the MT4 platform.
- Designed market-driven strategies for scheduled buy and sell operations.
- Reduced manual intervention by automating repetitive trading decisions.
- Improved execution consistency through scripted trading logic.

Manufacturing Automation Systems

AUTOCAD / CNC / CO2 LASER / SEWING AUTOMATION

- Designed sewing automation fixtures, clamps, and palettes to support repeatable production operations.
- Programmed CNC router and CO2 laser cutting workflows for prototypes and production parts.
- Supported manufacturing teams with tooling, layouts, and process improvements.
- Helped reduce manual effort and improve production consistency through practical automation.

Resume Website + CV Builder

HTML / CSS / JAVASCRIPT / BOOTSTRAP / POSTGRESQL

- Built a professional resume website with a hidden CV builder page for structured resume updates.
- Implemented LAPP/PostgreSQL resume data persistence with JSON export and import support.
- Created a print-ready resume preview and PDF generation workflow.
- Added automatic PDF archiving so previous resumes are preserved before saving a new version.
- Deployed the builder on a Proxmox TurnKey LAPP environment using Apache reverse proxy and a Node helper service.

SKILLS

Product Engineering: R&D, prototypes, technical specifications, BOMs, production readiness

Pattern & Marker Systems: Gerber Accumark, digitizing, grading, markers, Accunest, yield improvement

Manufacturing Leadership: production planning, team training, quality alignment, lean workflow improvements

Software Systems: JavaScript, SQL, APIs, dashboards, automation, Docker, Cloudflare

Design: Adobe Creative Suite, visual identity, technical documentation, UI design

CERTIFICATIONS

- AI Automation, LLM Apps, n8n & APIs
- AI for Business / AI 101 for Managers and Leaders
- Lean Inception, Design Thinking, Lean Startup
- Validate Business Idea: MVP