Jake Estrada

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Software Engineer

Backend-focused engineer building production systems used in real-world operations. Experienced in API design, data modeling, and workflow automation, with systems deployed and actively used in business environments.

PROFESSIONAL EXPERIENCE

Lead Developer | Liminal Innovations & Technology (LIT) | Lake Forest, CA | May 2025 – Present
- Architected backend systems with Node.js, Express, and MongoDB, optimizing database schemas and indexing
- Built real-time data synchronization using Socket.IO across users and displays
- Developed secure REST APIs with JWT authentication and role-based access control
- Deployed and maintained production systems using Render, Vercel, and AWS S3

Embedded Systems Engineer | Lightwall AI Installation Yembo | Remote | Sep 2025 – Jan 2026
- Contributed to a museum-deployed interactive AI installation responding to visitor movement and voice in real time
- Developed embedded C/C++ (Arduino) software for stepper motor control and radar-based motion detection
- Integrated sensor inputs (radar, audio) with motor-driven outputs for real-time physical interaction
- Tested and refined system behavior for reliability in a continuously running live installation

Sales, Operations & Technical Systems | **San Clemente Woodworking |** San Clemente, CA | Jun 2022 – Dec 2025
- Led client sales, estimating, and project coordination for custom staircase projects from inquiry through production handoff
- Identified operational inefficiencies in scheduling, communication, and job tracking within daily business operations
- Created photorealistic 3D models in SketchUp to support complex builds and improve client communication

Operations Supervisor | UPS | Aliso Viejo, CA | Jun 2014 – Jun 2022
- Supervised teams of up to 20 employees in high-volume logistics warehouse operations and managed dispatch coordination

PROJECTS

Paarth | Operations Management Platform | Lake Forest CA | 2026
- Designed, built, and deployed a full-stack operations platform replacing manual workflows in a construction business
- Used daily in production business operations to manage jobs, scheduling, and communication across teams
- Implemented real-time updates, audit logging, and role-based access control for multi-user system consistency
- Integrated external systems including Google Calendar, Twilio, and Plaid for operational automation

ShopView Kiosk | Real-Time Operations Display | Lake Forest, CA | 2026
- Designed and deployed a wall-mounted kiosk using Raspberry Pi and 55" display for real-time job visibility
- Built a live display interface pulling backend data for scheduling and operational tracking
- Implemented radar-based motion detection to wake the display and reduce idle power usage

NanoHub | E-Commerce Platform | Cal State Fullerton | 2025
• Built backend services using Node.js, Express, and MongoDB for a full-stack e-commerce platform
• Developed Python scraping and ETL pipeline using Beautiful Soup to ingest and normalize 1,000+ product records
• Designed REST APIs with role-based access control (admin/customer) and integrated Stripe for payments
• Built an admin analytics dashboard for order management and operational visibility

Transformer and LLM Systems | NLP and RAG Pipeline | Cal State Fullerton | 2025
• Built Transformer models for classification, summarization, and QA tasks
• Achieved ~79% accuracy on sentiment classification using encoder architecture
• Implemented RAG pipeline and parameter-efficient fine-tuning (LoRA, adapters)

TECHNICAL SKILLS

Languages: C/C++, Python, SQL, JavaScript/TypeScript
Backend & APIs: Node.js, Express, Flask, REST APIs, Auth (JWT, RBAC)
Databases: PostgreSQL, MongoDB, SQLite
Cloud & Tools: AWS S3, Docker, Git/GitHub, Vercel, Render, Postman, Insomnia

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EDUCATION

B.S. Computer Science | California State University, Fullerton | Jan 2024 - Dec 2025
A.A. Mathematics | Saddleback College | Jun 2021 - Dec 2023