Manan Santoki

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Summary

M.S. Computer Science student and open-source developer with experience building full-stack applications, developer tools, APIs, and data systems. Contributes to open-source software and enjoys using AI, backend systems, and automation to turn ideas into reliable products that people can use.

Education

Arizona State University — Tempe, AZ
Master of Science in Computer Science; ***Cumulative GPA:*** *3.22/4.00* — *Aug. 2025 – May 2027*

Vellore Institute of Technology — Vellore, India
B.Tech in Computer Science and Engineering; ***GPA:*** *3.16/4.00* — *Jul. 2021 – Aug. 2025*

Experience

Software Engineer — Jan. 2025 – Jul. 2025
Balkrushna Technologies Pvt Ltd
- Developed an internal tool for creating isolated CRM demo environments with masked customer data, cutting setup time from several hours to about 8 minutes.
- Automated database cloning, data masking, credential generation, and environment configuration so each demo could be created consistently with realistic data.
- Packaged the workflow with Docker Compose and used Jenkins to deploy it across managed Linux environments.

Software Developer — Sep. 2024 – Dec. 2024
Jalaram Wiremesh Co.
- Added inventory anomaly checks to a manufacturing ERP so teams could catch unusual stock changes before they disrupted operations.
- Developed more than 100 REST API endpoints and PostgreSQL workflows for inventory, production, reporting, and stock updates.
- Connected ERP alerts to WhatsApp notifications, helping operations staff respond to stock and order issues sooner.

Projects

Dispatch | *Next.js, NestJS, Tauri, Chrome CDP, MCP, WebSockets* — 2026
- Developed an AI browser agent that works inside a user's existing Chrome session through CDP, a browser extension, and native messaging.
- Implemented the multi-user system with a Next.js console, NestJS WebSocket relay, local Node.js service, Tauri desktop app, Chrome extension, and native host.
- Designed a shared Claude and Codex runtime with MCP tools, approval steps, operator handoff, per-user routing, and local credential isolation.

OCR Server | *FastAPI, PostgreSQL, Redis, MinIO, Ollama* — 2025
- Created a platform for comparing hosted APIs with self-hosted OCR and vision models, including GLM-OCR, PaddleOCR-VL, and Mistral OCR.
- Measured model speed and accuracy through repeatable background jobs using FastAPI, Redis queues, MinIO, rate limits, and webhooks.

Backslash | *Next.js, PostgreSQL, Redis, BullMQ, Docker, WebSockets* — 2025
- Developed a self-hostable open-source LaTeX editor with project and file management, live PDF previews, compile logs, templates, and a public REST API.
- Created a Redis and BullMQ build pipeline that runs LaTeX jobs in isolated Docker containers with configurable resource, network, permission, and timeout limits.
- Added optional AI debugging with OpenAI, Anthropic, and OpenRouter models to explain compiler errors, suggest focused edits, and queue new builds.

WhatsApp SaaS Platform | *Next.js, TypeScript, PostgreSQL, Redis, BullMQ* — 2025
- Developed a multi-tenant messaging platform with more than 150 REST API endpoints, QR device pairing, multiple sessions, role-based access, and a shared team inbox.
- Implemented bulk campaigns and scheduled messages with Redis and BullMQ queues, background workers, webhooks, delivery tracking, and live WebSocket updates.
- Added a RAG chatbot that answers questions from business documents through a website widget and a WhatsApp auto-responder.

Technical Skills

Languages: TypeScript, JavaScript, Python, SQL, Bash, Rust
Frontend: React, Next.js, React Native, Tauri, Tailwind CSS
Backend & APIs: Node.js, NestJS, FastAPI, REST APIs, WebSockets, Socket.IO, BullMQ
AI & ML: Claude Agent SDK, Codex App Server, MCP, RAG, LLM tool calling, Ollama, model evaluation, OCR/vision models
Data: PostgreSQL, Redis, SQLite, MongoDB, MinIO, Prisma, Drizzle ORM
Cloud & Infrastructure: Docker, Linux, Nginx, Jenkins, CI/CD, AWS, GCP
Certifications: AWS Solutions Architect – Associate | AWS Cloud Practitioner | Google Cloud Digital Leader