

MADHUKAR

Full-Stack Developer | Backend Engineer | SaaS Builder
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PROFESSIONAL SUMMARY

Computer Science undergraduate specializing in full-stack development and AI-integrated SaaS engineering. Built production-grade applications using Next.js, tRPC, Drizzle ORM, and Vercel AI SDK within Turborepo monorepos, with custom JWT authentication, semantic search, and LLM-powered features. Ranked Top 5 in Smart Bihar Hackathon (IIT Patna). Strong foundation in DSA, system design, and Agile delivery.

TECHNICAL SKILLS

- **Languages:** JavaScript, TypeScript, Java, C, HTML, CSS, SQL
- **Frontend:** Next.js, React.js, Tailwind CSS, Responsive Design
- **Backend:** Node.js, Express.js, tRPC, REST API, JWT, bcrypt, Zod, OpenAPI 3.0
- **AI/ML:** Vercel AI SDK, OpenAI API, LLM Integration, pgvector, Semantic Search
- **Database:** PostgreSQL, MongoDB, MySQL, Drizzle ORM, Redis
- **Testing & Tools:** Jest, Supertest, TDD, Git, GitHub, Docker, ServiceNow (ITSM), Turborepo, Monorepo Architecture
- **Methodologies:** Agile, Scrum, CI/CD, OAuth 2.0 (Google Login), Software Development Life Cycle (SDLC)

PROJECTS

- My Form – AI-Native Conversational Form Builder SaaS**

2025 – 2026

Next.js 16, React 19, tRPC v11, Zod, Drizzle ORM, PostgreSQL, Redis, Vercel AI SDK, Turborepo

GitHub | Live

 - Architected a Turborepo monorepo (2 apps, 7 shared packages) achieving end-to-end type-safety from PostgreSQL through Drizzle ORM, tRPC v11, and React Query
 - Engineered a dynamic Zod schema builder generating runtime validators across 11 field types, with conditional logic and cross-field validation shared between client and server
 - Integrated 3 AI capabilities via Vercel AI SDK and OpenAI — natural-language form generation, streaming follow-up questions, and AI response summaries — rate-limited via Redis
 - Implemented custom JWT auth with bcrypt hashing, SHA-256 refresh-token rotation with reuse detection, Google OAuth 2.0 login, and 3-tier Redis rate limiting; containerized with Docker and documented via OpenAPI 3.0 and Scalar
- MailOS – Keyboard-First AI Command Center for Email & Calendar**

2025 – 2026

Next.js, React, Drizzle ORM, PostgreSQL, Vercel AI SDK, Corsair SDK, Zod

GitHub | Live

 - Engineered a full-stack productivity SaaS integrating Gmail and Google Calendar via Corsair SDK’s multi-tenant Google OAuth login, with encrypted token storage and auto-refresh
 - Built a streaming AI agent (Vercel AI SDK + Gemma) with 5 function-calling tools enabling natural-language email sending, meeting scheduling, and inbox search
 - Implemented pgvector semantic search (1536-dim embeddings) and LLM-driven email priority classification, applied in real time via Gmail Push Notification webhooks
 - Designed a keyboard-first UX with 15+ vim-inspired shortcuts and a fuzzy `^K` command palette; secured with custom JWT auth (HMAC-SHA256 + scrypt), Edge Middleware, and a Docker-based local development environment

EDUCATION

- B.Tech in Computer Science & Engineering**

2025 – 2028

Maharishi Markandeshwar University (Deemed to be University)
- Diploma in Computer Science & Engineering — CGPA: 8.43 | Department Topper**

2022 – 2025

Government Polytechnic, Purnea

CERTIFICATIONS & ACHIEVEMENTS

- **ServiceNow Virtual Internship Program** — ServiceNow, Apr 2026 (ID: SNU2013853) — Verify
- **Full Stack Web Development Cohort 2026** — ChaiCode, July 2026 (ID: 10036473-250927) — Verify
- **Agentforce Specialist** — Salesforce, Dec 2025 (ID: 7312226) — Verify
- **Gen AI Academy 2.0** — Google Cloud, Dec 2025 (ID: 2025H2S10GENAI-DE00355) — Verify
- **Top 5** – Smart Bihar Hackathon, IIT Patna | **Department Topper** – Computer Science Engineering