OMKAR SANTOSH PAWAR

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PROFESSIONAL OVERVIEW

Full-stack & systems engineer skilled in React, Next.js, Node.js, and Python with strong experience in building high-performance apps, real-time systems, and AI/ML pipelines. Led full-stack SaaS builds, deployed production-grade e-commerce and real-time chat systems, and developed a college-funded Autonomous UAV with AI-driven perception. I thrive in fast-paced startup environments, rapid prototyping, and solving deeply technical problems.

FREELANCE PROJECT

NeoTribe ecommerce website

Next.js • TypeScript • Prisma • PostgreSQL (Neon) • Razorpay • Vercel Serverless • CDN • Auth • TanStack Table • GSAP • CI/CD

- Built a production-grade, scalable e-commerce site with Next.js App Router and serverless APIs.
- Architected a Prisma + Neon Postgres backend with **pooling, branching, and zero-downtime migrations.**
- Implemented Razorpay payments + webhook flow, secure auth, and role-based access.
- Built an **admin dashboard** using TanStack Table for real-time product & order management.
- Integrated a global CDN + optimized **GSAP**-animated UI for fast, responsive UX.
- Set up full CI/CD (GitHub → Vercel) with automated schema checks, linting, and preview deploys.

PERSONAL PROJECTS

ScrapeFlow – AI-Powered Web Scraping & Analysis Tool

- Used **Next.js + Prisma + Postgres** to build an automated scraping system, which reduced manual data collection time by **70%**.
- Designed a **workflow UI with React Flow + TanStack Query + Tailwind**, which orchestrated **10+ scraping pipelines in real time using puppeteer**.
- Integrated **AI-based modules**, which enabled pipeline-based automated insights with minimal setup.

Circl. Chat App

https://github.com/omkar6750/Chat-app

- Implemented real-time messaging with **<200ms** message latency.
- Added authentication, real-time presence, and fault-tolerant event flow from scratch without any libraries.
- Designed scalable chat architecture for horizontal growth.

The Hollows of Nethermoor

https://hollow-pearl.vercel.app/

- Used **Next.js + Next-Auth (Google OAuth) + Prisma + Neon Postgres** to implement authentication and persistent game logic, which ensured **reliable session handling**.
- Optimized heavy **media files with lazy loading and multiple rendering formats**, which cut asset load times by ~40% and reduced latency in gameplay transitions.
- Designed a **Tailwind CSS UI with interactive evidence viewers**, which streamlined conditional rendering for smoother in-game interactions.

ACADEMIC & RESEARCH PROJECTS

Developing an Autonomous UAV with AI-Driven Perception (College-Funded)

- Designed a twin-boom autonomous UAV (1.5m wingspan) with Ardupilot on STM32 based flightcontroller.
- Achieved **±1.5m** waypoint accuracy with mission planning + IoT telemetry.
- Achieved **10km primary control link** with edgeTx transmitter and receiver.
- Integrated **Raspberry Pi 4 + 4G HAT** enabling **unlimited 4G video/control link**.
- Built dual WebRTC + MAVProxy video pipeline with **>95% link stability** at 5 km+.

Sign Language Translator

- Used **TensorFlow** to train a gesture recognition model with **90%+ classification accuracy**, which enabled real-time sign-to-text translation.
- Deployed on a **Raspberry Pi with picam input**, which processed gestures in under **300ms per frame**.

EDUCATION

BE electronics and telecommunication
Atharva college of engineering
2022-2026

SKILLS

Languages: JavaScript, TypeScript, Python, C++
Frameworks: React, Next.js, Node.js, Express, Flask, Django
Tools & DBs: GSAP, MongoDB, SQLite, REST APIs, Zustand, React Query, Docker, Git, TensorFlow, WebRTC
Other: Tailwind CSS, DSA, Responsive Design, CORS, Auth, Socket.IO
Languages Spoken: English, Hindi,

ACHIEVEMENTS

- Secured college funding for AI-driven Autonomous UAV project; pitched technical/financial plan to a board of 10+ faculty.

- 1st Prize – Sci-Com Product Development Competition (built a consumer product + branding strategy)