

Ashutosh Pandey

🐙 GitHub 📁 Portfolio ✉ ashutoshpandey23june2005@gmail.com 📍 Lucknow, Uttar Pradesh, India

Summary

Full-stack engineer who ships. Built AI-powered products end-to-end including autonomous site-selection agents, sketch-to-website compilers, and real-time booking systems, independently and fast. Replaced LLM APIs with rule-based NLP to cut costs \$200+/mo, compressed 4MB payloads to under 100KB to eliminate 504 timeouts, and built 3-tier AI fallback pipelines for 100% uptime. Looking to be the early engineer who moves fast and owns outcomes.

Experience

Software Engineer Intern

DentalScan

Dec 2025 – Present

Florida, United States

- Designed database schema and migrations for the dental scan ingestion pipeline, structuring patient data for a compliance-sensitive, distributed medical platform.
- Wrote rate-limiting middleware from scratch to protect API endpoints from abuse and traffic spikes.
- Implemented HTTP cache-control headers and CDN caching for scan/API responses, cutting redundant origin requests.

Full-Stack Engineer Intern

Arinova Studio

Oct 2025 – Nov 2025

Lucknow, Uttar Pradesh

- Shipped rate-limiting middleware blocking 2,000+ malicious requests per day across 8+ API endpoints within the first week.
- Built full auth infrastructure including NextAuth, Google OAuth, WebSockets, and CORS, serving 500+ users in production.
- Cut authentication errors by 40% and standardized API behavior across 12+ endpoints.

Education

Bachelor of Technology – Computer Science

Shri Ramswaroop Memorial University

Jul 2023 – Jul 2027

Lucknow, India

Projects

SketchFlow AI – Sketch-to-Website Platform

Live Demo

Next.js, React, Supabase, Ollama, WebAuthn, OpenRouter, Vercel

- Engineered a database-driven runtime React compiler in Next.js, bypassing Vercel's stateless filesystem by dynamically compiling Supabase-backed source code on the fly.
- Slashed sketch upload sizes by 97.5% from 4MB to under 100KB via client-side canvas downscaling and JPEG compression, eliminating 504 gateway timeouts.
- Built a 3-tier AI pipeline using Ollama SLMs, OpenRouter, and Gemini with a deterministic layout compiler fallback, guaranteeing 100% sketch-to-website uptime.
- Implemented passwordless biometric auth via WebAuthn API with an origin-agnostic handshake supporting both localhost and HTTPS production environments.

Atlas AI – Autonomous Commercial Renewable Site Control Agent

Live Demo | GitHub

Next.js 16, TypeScript, Mireye API, NREL, USGS 3DEP, FEMA, Turso, SSE

- Engineered an autonomous spatial siting agent ingesting 500+ parcel portfolios to evaluate physical GIS constraints (NREL solar radiometry, USGS 3DEP LiDAR slope, FEMA flood clearance, and Mireye transport drive times).
- Built a real-time SSE streaming pipeline & 10-stage replayable trace, delivering sub-second progress updates and automated rejection proofs to eliminate \$120k+ civil earthwork and transport escort overruns.
- Designed a 2-tier caching architecture & adaptive chunking engine (batch size of 15) with exponential backoff, handling Mireye rate limits and preventing duplicate credit consumption across bulk scans.
- Automated institutional underwriting, generating downloadable 3-page executive investment memos with IRA \$48 tax credit bonus calculations, pro-forma financials, and land option agreements.

InventoryAI – AI-Powered Inventory Decision System

Live Demo | GitHub

Next.js, TypeScript, PostgreSQL, Prisma, Tailwind, Zod

- Built a SaaS inventory system with stockout prediction, automated reorder recommendations, and dead stock detection.
- Developed a natural language assistant for querying stock data and generating demand-based insights.

Technical Skills

Languages: C, JavaScript, TypeScript, Python

Frameworks: React.js, Node.js, Express.js, NestJS, Next.js, Prisma, Tailwind CSS

Databases: MongoDB, PostgreSQL, SQL, Turso

Concepts: REST APIs, WebSockets, SSE, JWT, OAuth2, RBAC, Rate Limiting, Real-time Systems, NLP, Geospatial/GIS Data Processing

Tools: Git, GitHub, VS Code, Vercel, Railway, Ollama, OpenRouter

APIs/Data: NREL, USGS 3DEP, FEMA, Mireye