

AYUSH BHALERAO

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SUMMARY

Software Developer specializing in scalable backend systems, AI integration, real-time applications, and modern web infrastructure. Experienced in building production SaaS products, AI integration, high-concurrency APIs, moderation pipelines, and implementing cost-effective serverless architectures using **Next.js, Go, PostgreSQL, Cloudflare Workers, FastAPI, Flask & ExpressJS** in time-constrained environments.

EXPERIENCE

Founding Engineer

March – June

AlphaJEE(Acquired)

Remote

- Led & shipped several projects including an **AI enabled Adaptive Testing platform, client-side parsers, data analytics dashboards, social forum, and ml based moderation pipelines** in time-constrained environment.
- Built an **AI enabled Adaptive Question Solving platform** using 3PL-IRT, semantic similarity models, and per-student knowledge graphs with Next.js, Go (gorilla/mux), and PostgreSQL.
- Built a **JEE Mains response sheet checker** in Next.js with a client-side scraper/parser, serving **28k+ response sheet evaluations**.
- Built a **multi-stage moderation pipeline** (SBERT, NudeNet, Gemini API) on **GCP Cloud Run** with FASTAPI as the bridge.
- Migrated core infrastructure from Supabase to **Cloud SQL (PostgreSQL)**, improving scalability for high-concurrency workloads.

PROJECTS

Prediction Market — BetJEE | REST APIs, NextJS, PostgreSQL | [Blog](#) | [GitHub](#)

February 2026

- Built a virtual prediction market withing 3 days which handled **2300+ database users and 1.2M requests in 48 hours** via Supabase Edge Functions, [blog](#).
- Engineered an optimized v2 using **LMSR (Logarithmic Market Scoring Rule)**, **Cloudflare Workers**, NextJS and **Durable Objects with Hibernation API** for stateful, low-latency trade matching.
- Implemented **atomic trade execution in PL/pgSQL** with row-level locking to prevent race conditions.
- Developed **recursive stop-loss systems** in PostgreSQL RPCs and automated **anti-bot IP blacklisting**.

[→ More projects on my portfolio](#)

TECHNICAL SKILLS

Languages: JavaScript/TypeScript, Python, Go, C, SQL (PostgreSQL)

Fullstack Frameworks & AI integration: Next.js, React, Tailwind CSS, Express.js, Redux, Redis, Gemini API, Grok API, Openrouter

Backend & Tools: REST APIs, WebSockets, Cloudflare Workers, FastAPI, Supabase, Google Cloud Platform (GCP), Node.js, Git/GitHub, Linux

ML & Data: scikit-learn, FAISS, SBERT, Vector Databases, LLaMA, Pandas, NumPy

INTERESTS

Product & Startups: prefer owning responsibility for the code end-to-end – shipping, scaling, and living with the consequences of my own decisions

Cybersecurity: build and audit secure systems, documented thoroughly – responsibly disclosed a CAPTCHA/rate-limit vulnerability on IIT Kanpur's [B.Cyber registration portal](#)

Hardware, IoT & Linux: discrete-logic hardware, local-first/on-device AI (llama.cpp), linux & ricing (Nvim configs, [sakurafetch](#))

EDUCATION

City Pride School

AISSCE – CBSE (XII), Grade: 87.2%

2026

Pune

Dr. D.Y. Patil Public School

AISSE – CBSE (X), Grade: 93%

2024

Pune