Raghav Sharma

Cloud & Full Stack Engineer | AWS, Docker, CI/CD, TypeScript, React, Next.js, Node.js, Python, AI/ML, PostgreSQL

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PROFESSIONAL SUMMARY

Cloud and full stack engineer with 5 months of professional SDLC experience and 2 paid client systems deployed to production PaaS cloud hosting (Railway, Vercel). AWS Academy certified in Cloud Architecting and Data Engineering; containerises services with Docker and automates build, test and deploy through CI/CD pipelines. Builds AI/ML systems end to end: LLM-driven agents, gradient-boosted and unsupervised anomaly detection, and computer vision models trained from scratch. Shipped a 4,500-line Python agent with 155 automated tests and a measured +26.6 pp recovery lift (95% CI ±3.8). Solved 150+ LeetCode problems; strong in DSA, distributed systems and OS internals.

TECHNICAL SKILLS

Cloud & DevOps: AWS (Cloud Architecting, Data Engineering, Cloud Security), Docker, containerisation, CI/CD (GitHub Actions), Git, Vercel, Railway, environment and secrets management, deployment automation
Languages: TypeScript, JavaScript (ES6+), Python, C, C++, SQL
Frontend: React 19, Next.js 15, Vite, Tailwind CSS, component architecture, responsive UI, state management
Backend: Node.js, Express.js, FastAPI, RESTful API design, middleware, JWT and session-based authentication, RBAC, bcrypt, SHA-256 token hashing, idempotent endpoints, transactional outbox pattern
Databases: PostgreSQL, SQLite, Prisma ORM, Firebase; relational schema design, normalisation, migrations, event sourcing, append-only ledgers, data integrity
AI / ML: Computer vision, deep learning, model training from scratch, LLM integration and agentic pipelines (Gemini 2.5 Flash, Google GenAI SDK), LightGBM (gradient boosting), Isolation Forest, supervised and unsupervised anomaly detection, feature engineering (CIC-IDS2017), statistical evaluation (confidence intervals, holdout testing, Benjamini-Hochberg FDR)
Testing & Security: Unit, integration and regression testing, root-cause analysis, code review, IDOR and broken-access-control remediation
CS Fundamentals: Data structures and algorithms (150+ LeetCode), OOP, operating systems, CPU scheduling, distributed systems, fault tolerance, replication, computer networks

EXPERIENCE

Full Stack Developer | Downpour Consultancy Services Pvt Ltd | Jan 2026 - Jun 2026

- Shipped 10+ client features and fixes across the full stack: React UI components, Node.js/Express RESTful endpoints and the PostgreSQL relational data layer, built to written functional specifications over 5 months.
- Debugged and resolved defects through code review, root-cause analysis and regression testing; validated front-end/back-end integration over REST APIs against requirements.

Freelance Full Stack Developer | Self-employed, Remote | 2026 - Present

- Delivered 2 paid client systems across the full SDLC (requirements, schema design, build, Railway cloud deployment, support), including GoStudy, a catalogue and admin CMS in daily production use.
- Engineered a secure authentication layer with bcrypt password hashing and server-side sessions that persist only SHA-256 token digests, plus a validated image-upload pipeline.

PROJECTS

Deep Shield: Computer Vision System | Python, Computer Vision, Deep Learning | Global AI Summit showcase, Nov 2026 (solo, in progress)

- Designing and building an end-to-end computer vision pipeline solo for the Global AI Summit project showcase on 18 Nov 2026.
- Training custom models from scratch where feasible instead of relying only on pretrained weights, targeting research-grade, reproducible evaluation.

Backstop: AI Revenue Recovery Agent | Python, FastAPI, React, Vite, SQLite, Docker | Razorpay AI Buildathon, Track 03 | github.com/Raghav-prog-max/backstop

- Built a ~4,500-line Python agent around a deterministic 8-rule policy engine; every deny, defer, suppress and hard-stop decision is persisted for auditability.
- Designed an event-sourced, append-only ledger with full replay and exactly-once dispatch via the transactional outbox pattern and idempotency keys.
- Achieved 155 passing automated tests; containerised the service with Docker and set up a CI/CD workflow with an AWS deployment guide.
- Measured +26.6 pp recovery lift (95% CI ±3.8) on a 6,000-case synthetic batch against a 580-case untouched holdout, across 24 slices under Benjamini-Hochberg FDR control.

NeuroFS-DOS: AI-Driven Distributed OS Simulator | Next.js 15, React 19, TypeScript, Firebase, Gemini 2.5 Flash

- Engineered heartbeat-based node failure detection and RPC replication for fault tolerance, tested against partial-failure.
- Implemented a Trie-indexed virtual file system, an LRU cache and 4 CPU scheduling algorithms (FCFS, Round Robin, SJF, Priority), driven by an LLM Intent → Planner → Execution command pipeline.

City Healer: Healthcare Coordination Platform | React, TypeScript, Express.js, JWT, Railway | city-healer-production.up.railway.app

- Deployed a 4-role RBAC platform; security-audited it and closed unauthenticated endpoints, privilege escalation and IDOR-style cross-patient data exposure, re-testing every fix.
- Wrote JWT middleware that verifies every token server-side before business logic, enforcing authorisation at the API layer.

NetWatch: ML Network Intrusion Detection System | Next.js, FastAPI, LightGBM, Isolation Forest, PostgreSQL | Microsoft Innovate 2026, team of 6

- Owned integration and deployment of the FastAPI/PostgreSQL inference service and Next.js SOC dashboard surfacing anomalous network traffic from supervised (LightGBM) and unsupervised (Isolation Forest) models trained on CIC-IDS2017; one of 2 pitch presenters.

ACHIEVEMENTS

150+ LeetCode problems solved across core data structures and algorithms | Razorpay AI Buildathon (Backstop) | Microsoft Innovate 2026 (NetWatch, one of 2 presenters)

CERTIFICATIONS

AWS Academy Graduate: Cloud Architecting (2026), Data Engineering (2026), Cloud Security Foundations (2025), Cloud Foundations (2025) | The Bits and Bytes of Computer Networking, Google / Coursera (2026)

LEADERSHIP

- **Sponsorship Head, Hackloop** (Jul 2025 - Present): prospected 10+ companies and closed 3 sponsorships that fully funded the event.
- **Head of Marketing, GeeksforGeeks Student Chapter** (Nov 2025 - May 2026): ran 5+ technical events reaching 5,000+ students and secured the chapter's first international industry partnership, with Casio.

EDUCATION

B.Tech, Computer Science and Engineering | Bennett University, Greater Noida | Expected 2028