# Unnat Agrawal

unnatagrawal195@gmail.com linkedin.com/in/unnat7779 | github.com/unnat7779 New Delhi, India | +91-9873445866

Software Engineer | TypeScript · Node.js · React/Next.js · C++ | CodeForces Specialist

## EDUCATION

**B.Tech, Computer Engineering** | Delhi Technological University (DTU), New Delhi 2023 – 2027 | **CGPA 8.83/10**

## EXPERIENCE

**Software Engineer & Trading Strategy Intern** | *Equinex Wolfex LLP* Sep 2026 – Present

- Built a multithreaded backtest engine sweeping **10,000+ parameter sets** in Web Workers with 65% latency reduction; ranked strategies across 5 timeframes by Calmar/MaxDD net of 6 modeled cost layers (slippage, STT).
- Engineered a **sub-second** terminal streaming Upstox ticks (WebSocket) and 3 news feeds (Cloudflare Worker SSE); reduced auth failure rates to 0% via backoff retries and guarded stability with **730+ automated tests**.

**Software Engineer Intern** | *Sprinklr* Jun 2026 – Jul 2026

- Engineered a headless **React/TypeScript Survey SDK (npm)** so teams ship their own branded surveys without rebuilding survey logic: full Survey Builder parity across 12 question types and 50+ features, **adopted by 4 product teams**.
- Cut survey integration from **4 days to 2 hours** with an AI flow that turns an LLM prompt into a deployed survey.
- Collaborated with each adopting team through integration and rollout, debugging and fixing issues as they surfaced.
- Merged via senior code review and CI (**600+ Vitest tests, 90% coverage**), fixing regressions across 200+ full SDK test runs.

**Software Engineer & Research Intern** | *Lokachakra, UK (Remote)* Jun 2025 – Jul 2025

- Designed and documented a **P2P architecture** (WebRTC, STUN/TURN, IPFS) to reduce reliance on a central media server; reviewed **20+ research papers** and P2P designs on connectivity, NAT traversal, and decentralized data exchange.

**University Intern** | *University Students Internship Program, General Administration, DTU* Sep 2024 – Feb 2025

- Developed an admin portal for DTU's flats, streamlining rent computation, **500+ payment records**, and tenant profiles.

## PROJECTS

**X Monitor**: Real-Time Market Sentiment & Tweet Tracker | *GitHub* Next.js, AWS S3, Pusher, Chrome MV3

- Built a webhook ingestion pipeline that normalizes and de-duplicates **1,000+ tweets a day** from 20+ channels into an S3 store with optimistic-concurrency writes, pushing breaking market news to a **Chrome Extension (MV3)** in **under 500 ms**.
- Architected event-driven streaming (Pusher WebSockets, HTTP 304 ETag caching), cutting daily outbound bandwidth by **99%+ (10 GB+ to ∼1 MB)** and eliminating **6,500+ redundant serverless invocations**.

**JEE Elevate**: Online Assessment & Analytics Platform | *GitHub* | *Live* Next.js, MongoDB, Recharts, NextAuth, Azure

- Launched a testing portal serving **1,900+ students** across **1,350+ autograded attempts**, with session booking management for **200+ sessions**, real-time attempt analytics, and Azure Blob Storage uploads.
- Built a bulk-upload parser that turns tagged text files into structured MongoDB question records (type, subject, chapter, difficulty) in ∼**10 min per file**, replacing an estimated **25 hrs** of manual entry for 750+ questions.
- Resolved **20 student-reported bugs** via an integrated workflow, with fixes broadcast to 1,900+ students.

**Edojo Learning**: 1:1 Live Tutoring Platform | *GitHub* | *Live* Next.js 16, WebRTC, MongoDB, Docker

- Implemented a real-time **WebRTC 1:1 video classroom** so tutors can teach, annotate PDFs and quiz in one session: Socket.IO signaling, a dual-stream PDF canvas whiteboard and **sub-200ms whiteboard sync** across concurrent sessions.
- Designed the backend (67 REST routes, 19 Mongoose schemas): 3-role RBAC and JWT/OAuth 2.0 security, a subscription ledger, and first-touch UTM attribution across a **6-stage lead funnel** to show which channels convert trials to paid.

## ACADEMIC ACHIEVEMENTS AND AWARDS

- **Specialist** at CodeForces (max 1475), **3-star** at CodeChef (max 1663); solved **1,000+ problems** on LeetCode and GFG.
- **2nd place** (Student Branch Winners) in **IEEE Xtreme 18.0**, a 24-hour global contest; won **Error 404** hackathon (100+ teams).
- Awarded **Outstanding WIE Student Volunteer Award**, IEEE Delhi Section, among 100+ IEEE Student Branches.

## TECHNICAL SKILLS

- **Programming Languages:** TypeScript, JavaScript, C++, Python, SQL
- **Frontend & Web:** React.js, Next.js (App Router), Tailwind CSS, WebRTC, Chrome Extensions (MV3)
- **Backend & Databases:** Node.js, Express.js, RESTful APIs, WebSockets, JWT, OAuth 2.0, PostgreSQL, MongoDB
- **Cloud & Tooling:** Linux, Git/GitHub, Docker, AWS, Azure Blob Storage, Cloudflare Workers, Vitest, CI/CD
- **AI-Assisted Development:** Cursor, OpenAI Codex, Claude, v0, Antigravity; review and testing of AI-generated code
- **Practices:** Code Review, Debugging, Unit & Integration Testing, Performance Optimization, HLD/LLD, Agile/Scrum
- **CS Fundamentals:** Data Structures & Algorithms, OOP/OOD, DBMS, Operating Systems, Computer Networks

## POSITIONS OF RESPONSIBILITY

**Vice Chairperson** | *IEEE DTU Computer Society Chapter* Aug 2026 – Present

- Led **200+ executives** across 6 departments to deliver 6 flagship events with **15,000+ registrations**; secured 15+ sponsorships and 5+ industry keynotes (incl. Striver); mentored **100+ students** under the Web Development SIG.