

ANMOL AGARWAL

Noida, India | +91 87917 68081 | anmolagarwal2625@gmail.com
linkedin.com/in/anmolagarwal26 | github.com/iAnmolAgarwal | [Codeforces](https://codeforces.com/profile/iAnmolAgarwal) | [CodeChef](https://www.codechef.com/users/iAnmolAgarwal)

EDUCATION

Jaypee Institute of Information Technology (JIIT)

Noida, India

B.Tech in Computer Science and Engineering — CGPA: 8.5/10 (Semester 4 SGPA: 9.4/10)

Expected May 2028

- **Relevant Coursework:** Data Structures & Algorithms, Design & Analysis of Algorithms, OOP (C++/Java), DBMS, Theory of Computation, Competitive Programming, Foundations of AI & ML

TECHNICAL SKILLS

Languages: C++, Python, TypeScript, C, SQL

Frameworks & Libraries: React Native (Expo), React, pydantic, pandas, NumPy

Backend & Databases: PostgreSQL, Supabase (Row Level Security, RPCs, triggers, Edge Functions), REST APIs, WebSockets

AI/ML Tooling: Anthropic Claude API & SDK, Claude Code, prompt engineering, vision LLMs, AI agents, prompt-injection defense

Tools & Practices: Git, Vercel, Playwright, pytest, Test-Driven Development, ruff, mypy, Google OAuth

EXPERIENCE

Bharat Space Education Research Centre (BSERC)

Jun 2026 — Present

Summer Intern

- Selected for a 6-week applied space-technology program spanning generative AI, cybersecurity & digital forensics, and UAV/drone systems; scoping a capstone engineering project.

PROJECTS

Jbites | TypeScript, React Native (Expo), Supabase/PostgreSQL, Vercel

In Development

- Architecting a full-stack, server-authoritative pre-order and pay-ahead platform (customer + kitchen apps, Supabase/Postgres backend) to digitize a campus cafe's ordering queue; ran a closed beta with 270+ sign-ups to validate the flow ahead of a planned campus rollout.
- Engineered an atomic stock-reservation RPC using Postgres row-level (FOR UPDATE) locking and a short-TTL holds ledger, guaranteeing a single winner under concurrent checkout to eliminate overselling, backed by three defensive validation layers.
- Discovered and fixed three critical/high vulnerabilities (privilege escalation, forgeable payment webhook, auth bypass) via adversarial testing — issues an automated scanner missed — hardening the backend with Supabase Row Level Security, SECURITY DEFINER RPCs, and Edge Functions.

Multi-Modal Damage-Claim Verification Agent | Python, Anthropic Claude API

[GitHub](#)

- Developed (solo) an AI agent that verifies insurance damage claims from photos — Top 4% globally (#63 of 1,773) at the HackerRank Orchestrate hackathon — via a two-stage perception-to-deterministic-fusion design that keeps the final verdict in code, with a structural prompt-injection defense so an adversarial image can never force a false approval.
- Selected the production model through measured evaluation (Claude Sonnet 4.6 over Opus 4.8 — higher accuracy at roughly half the cost), reaching 18/20 on the labeled gold set at about \$0.64 per 44-claim batch with a 43% prompt-cache saving.

ORB-Trader — NSE Intraday Trading Bot (paper-trading) | Python, KiteConnect, WebSockets

[GitHub](#)

- Designed an opening-range-breakout bot (ORB + session VWAP + RSI gate) for 15 NSE equities with full risk management — 1% position sizing, concurrency and daily trade caps, a -3% kill-switch, and timed square-off — validated by a 194-test suite written test-first (TDD).
- Diagnosed and fixed a production-grade concurrency freeze (a cross-thread WebSocket close silently swallowed by the reactor thread) by first reproducing it as a failing regression test, then rebuilding the reconnect as an atomic reactor-thread callback with exponential backoff.

Smart E-Nose — IoT Food-Spoilage Detector | C++, ESP32, ThingSpeak/Blynk/Telegram

[GitHub](#)

- Prototyped a low-cost (about \$24) IoT device that detects food spoilage via a four-sensor MQ gas array — versus \$8,000–30,000 commercial units — in a 4-person team, personally owning the hardware, firmware architecture, and cloud integration.
- Architected the roughly 920-line ESP32 firmware as a five-state sampling machine and integrated three concurrent cloud services (Blynk, ThingSpeak, Telegram) for live monitoring and 2–3s alerts; resolved an ESP32 ADC2/Wi-Fi conflict by remapping all sensors to ADC1. Manuscript under review at *Sensors and Actuators Reports* (Elsevier).

ACHIEVEMENTS & COMPETITIVE PROGRAMMING

- **Competitive Programming:** Codeforces Pupil (max rating 1362) with a 209-day solving streak; CodeChef 2-star (max 1565); 3,000+ problems solved across platforms.
- **IICPC:** Global rank #2,155 in an offline international coding contest featuring candidates from IITs and NITs.
- **BVCOE Coding Cup:** Finished in the top 8 teams across a 3-round contest (proctored quiz, offline round, and 1v1 duel).
- **Academics:** 9.4/10 SGPA in Semester 4 (top performer); Class XII 92.8% (3rd in school, PCM stream) and Class X 96% (CBSE).

POSITIONS OF RESPONSIBILITY & CERTIFICATIONS

- **Core Team Member — JPEG (Photography Club, JIIT)** (Aug 2025 — Apr 2026); joined as a volunteer in Sep 2024 before being promoted to the core team.
- **Certifications:** Anthropic — Claude Code 101; TLE Eliminators — Competitive Programming (Level 1).