Varun Narayan Jain

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Summary

Computer Science student (GPA 9.07/10, Dean's List x3) currently shipping production code as a software engineering intern at SeedlingLabs, on an AI teaching platform used by CBSE and ICSE schools. Previously automated geospatial pipelines at Tata Advanced Systems. Drawn to engineering problems that put something real in people's hands, and comfortable learning unfamiliar codebases fast.

Experience

Software Engineering Intern, SeedlingLabs Private Limited – Bengaluru June 2026 – Present

- Built and shipped features into a live AI teaching platform used by schools, across 200+ reviewed and tested pull requests. Notable work: a golden dataset for question-paper generation following CBSE and ICSE patterns, role-based access control over PostgreSQL row-level security, and fail-closed guards that block AI calls when the governance layer goes down.
- Set up the company's first production monitoring stack using Prometheus metrics, integrating 7 Grafana dashboards, Loki log search, and 19 Slack alert rules surfacing latency and error-rate issues that previously went unnoticed for days. Added per-call cost tracing to attribute AI spend per school.
- Rebuilt textbook processing to run in the background instead of blocking the app, using Celery and Redis with S3 pre-slicing, cutting data transferred per request by ∼90% (3–5 MB chapter slices instead of 50–100 MB files) and fixing upload failures under load through retry-backoff and concurrency caps.
- Let the business turn features on or off per school from an admin panel with no code release, by building a 30-feature entitlement catalogue with a deny-by-default school/org/plan override chain and migrating 77 API permission checks onto a single authorization path.

Software Engineering Intern, Tata Advanced Systems Limited (TASL) – Mumbai June 2025 – July 2025

- Reduced end-to-end map render time in Bhugyan GIS by automating raster layer ingestion, after ramping onto an unfamiliar geospatial codebase with a mentor and subject-matter experts.
- Removed manual steps from the map publishing workflow by building CLI and Docker pipelines for WMS publishing, seeding, and unpublishing, and extending the automation framework with coordinate conversions, GIS annotations, and spatial algorithms (shortest path, visibility analysis).

Projects

GeM Tender Automation – Python, Playwright, Groq LLM, Sheets & Telegram APIs Github

- Removed a recurring manual tender-review task from a live procurement workflow by building an agentic Playwright scraper over Government e-Marketplace listings, with an LLM scoring each tender for relevance and bid-readiness, results logged to Google Sheets, and Telegram alerts fired on match.

Smart Retail Analytics – Python, OpenCV, YOLOv8, SORT, React, Vite Github

- Ran real-time footfall counting, occupancy tracking, and Gaussian heatmaps at 5.30 FPS on commodity hardware with no GPU, no cloud, and no stored imagery, by pairing YOLOv8n detection with SORT tracking behind a React + Vite dashboard – validated against real store footage.

Academic Early Warning System – FastAPI, ChromaDB, Groq, Supabase, React Live | Github

- Replaced manual review of student performance with automated risk tiering across 15 data models and 5 performance parameters, by building a FastAPI + Supabase PostgreSQL service whose ChromaDB/Groq RAG pipeline retrieves per-student context and drafts intervention plans for counsellors.

Technologies

Languages: Python, Java, C++, TypeScript, JavaScript, SQL.
Backend & Infrastructure: FastAPI, Flask, Node.js/Express, PostgreSQL (incl. Row-Level Security), MongoDB, SQLAlchemy, Celery, Redis, REST APIs, Docker & Docker Compose, Terraform, AWS (S3, EC2, ECR, Bedrock), Prometheus, Grafana, Loki.
Frontend: React, Next.js, Vite, Tailwind CSS.
AI/ML: AWS Bedrock (Claude), Google Gemini, OpenAI, Groq, LangChain, RAG pipelines, ChromaDB, YOLOv8, OpenCV, TensorFlow, Scikit-learn, NumPy, Pandas.
Practices: Git/GitHub, pull-request workflow, code review, pytest, CI, technical design docs, Agile.

Education & Achievements

Manipal University Jaipur, B.Tech in Computer Science | GPA: 9.07/10.0 2023 – 2027

- Dean's List of Excellence, three semesters. Hackathons: 1st Prize at Randomize, MUJ (exam-integrity detection portal); Top 5 of 200+ teams at Techkriti, IIT Kanpur (CNN skin-lesion classifier).
- **Technical Secretary**, MUJ ACM Student Chapter (2025–present) – run technical operations for chapter events, coordinating across a 10-person committee.