

# Charan Nihaal R

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## SUMMARY

Computer Science student (B.E. CSE, expected May 2029) who works mainly in Python, with JavaScript for web work, and learns by building, testing and debugging real projects, from backend services and web apps to LLM-based tools. Looking for software engineering, full-stack or AI/ML internships.

## EDUCATION

**S.A. Engineering College**, Avadi, Tamil Nadu — B.E., Computer Science and Engineering · Expected May 2029 · CGPA 9.46/10 (through Semester 2)

**Montfort Senior Secondary School (CBSE)**, Sriperumbudur — Completed May 2025 · Student Council Member; School Pupil Leader

## SKILLS

- **Languages:** Python (intermediate), Java (OOP, multithreading), JavaScript, TypeScript, HTML/CSS, SQL (fundamentals)
- **Frameworks & libraries:** FastAPI, pytest, React, Node.js, Discord.js, Tkinter
- **AI / tools:** Gemma 4 (via Ollama and the Gemini API), Git/GitHub, GitHub Actions, Vercel, Replit, MongoDB
- **Practice:** debugging, testing and code review, iterative prototyping, AI-assisted development

## PROJECTS

**TrustIntern — free scam-risk checker for internship offers** (Gemma 4, FastAPI, React) · Oct 2026  
trustintern.charancodes.com · github.com/compteccharan/TrustIntern · write-up on DEV

- Built TrustIntern for DEV's Hacktoberfest Open-Source AI Challenge in 5.5 hours, working with AI coding agents.
- Python/FastAPI backend: fixed checks (email domain vs. company, domain age via RDAP, website, message wording) feed a deterministic risk score that can be recomputed by hand; the model never assigns points.
- Gemma 4 plans which allowlisted research agents to run, with a heuristic fallback when no model is reachable, and reads uploaded offer-letter PDFs and screenshots; progress streams over Server-Sent Events.
- pytest tests and GitHub Actions CI (build, lint, test); deployed on Vercel.

**Planetfall — open-source contribution** · github.com/blackgirlbytes/planetfall-seed-signalkit

- Fixed a duplicate-leaderboard bug in a 3D browser game: added normalized-username identity checks, switched saves to an upsert path, and migrated existing rows to remove duplicates.
- Wrote a 5-case test suite covering normalization, score replacement and tie-breaking; reviewed and merged by the maintainer.

**PeriodAllocator — substitute-teacher scheduling system**

- Designed and deployed a tool that ran at my school for about three months, modeling free periods, subject strengths and allocation credit to propose substitute assignments.
- Found after deployment that it broke when several teachers were absent at once; the next version would need teacher-facing availability input.

**animated-welcome — npm package for Discord welcome GIFs** · npm: animated-welcome

- Renders animated welcome GIFs with canvas, gif-encoder-2 and sharp; used in my Discord bot Aquire's welcome flow.
- Hit Discord's embed rate limits above 40 fps in testing and settled on 40 fps as the highest reliable rate.

**Other:** Aquire, a Discord bot that passed Discord's verification review (100+ servers), later rebuilt in Python · ArcValet, a Python/Tkinter valet-management app for coursework · Daily Necessities, a 3-person e-commerce web app (cart, orders, reviews, filtering).

## ACHIEVEMENTS & CERTIFICATIONS

1st Place, E-Cell BizQuiz · 3rd Place, E-Cell BidBuild · Participant, KALAM'25 TECHMANIA Round 2

Certifications: AI Skills Fest 2026 (Microsoft); MongoDB Overview: Core Concepts & Architecture (MongoDB)