Ravi

B.Sc. in Applied AI & Data Science @ IIT Jodhpur (2025–2029) · CA Intermediate (ICAI)

b25bs1273@iitj.ac.in
GitHub: github.com/Hellinferno
LinkedIn: linkedin.com/in/raviiitcaintermidiate

Applied AI and Data Science undergraduate at IIT Jodhpur combining software engineering, agentic systems, hybrid retrieval pipelines, graph reasoning, and deterministic financial/numerical computing. Focused on building verifiable AI software with strict grounding, sandboxed execution, and automated test suites.

EDUCATION

Indian Institute of Technology (IIT) Jodhpur 2025 – 2029
B.Sc. in Applied AI and Data Science
Python, Machine Learning, Statistical Learning, Algorithms, AI Club & Hackathons

Institute of Chartered Accountants of India (ICAI) 2025 – Present
CA Intermediate (Cleared CA Foundation)
Financial Reporting, Corporate Finance, Costing, Taxation, Auditing & Compliance

FEATURED ENGINEERING PROJECTS

ClaimLab — Source-Grounded Teaching & Numerical Verification Workstation Python · FastAPI · React 19 · TypeScript
github.com/Hellinferno/ClaimLab

- Coupled Meta `muse-spark-1.3` with a transactional SVG whiteboard (`BoardPatch` state machine) and three reviewed float64 NumPy laboratories (Softmax sensitivity, Attention dimension scaling, Causal masking) plus isolated sandboxed experiments.
- Implemented strict epistemic tagging (`[Source]`, `[Experiment]`, `[Background]`), 2-variant mastery progression, HMAC-SHA256 tenant isolation, and SHA-256 idempotency fingerprinting; verified with **123 offline + 2 live passing pytest tests** and GitHub Actions CI.

AegisGraph — MCP-Native Graph Incident-Response Agent Python · FalkorDB · MCP · FastAPI · React
github.com/Hellinferno/graph-hack-

- Engineered an incident-response agent backed by FalkorDB (9 node labels, 11 relationship types, HNSW vector + full-text indexes) exposing 13 MCP tools over stdio/SSE to trace multi-hop CVE blast radius across code, services, IAM roles, and PII databases.
- Used `algo.betweenness` and `GRAPH.COPY` counterfactual sandboxes to prove exposure drops from 6 to 0 paths while keeping 4/4 critical flows connected (`algo.WCC`) prior to executing reversible `ActionAudit` mutations.

StudyLab — Modular Hybrid RAG & Verified Solver Platform Python · Hybrid RAG · SQLite · Docker Compose
github.com/Hellinferno/Tutor-AI-

- Built a 3-service architecture (`gateway:8000`, `rag:8001`, `solver:8002`) featuring hybrid sparse+dense retrieval, reranking, character-offset citations with low-confidence rejection, and opt-in durable SQLite persistence mirroring Postgres migrations.
- Designed an AST-allowlisted, isolated subprocess (`python -I -S`) code execution and symbolic/finance solver gated by an evaluation harness requiring `false_verified_rate = 0`.

FinMod-Agent (FMVA) — Financial Modeling & Valuation Engine Python · FastAPI · React · Recharts · pytest
github.com/Hellinferno/finmod-agent

- Developed an institutional valuation pipeline covering 500+ field-alias JSON normalization, balance-sheet plug checks, Gordon Growth & Exit Multiple DCF, CAPM WACC via `yfinance`, comparable companies, 2D sensitivity matrices, and immutable audit logs.
- Built a 9-screen React/Tailwind/Recharts valuation interface and multi-sheet Excel/JSON exporter backed by **40/40 passing pytest tests**.

Additional Open-Source Systems Rust · Cloudflare Workers · PyTorch · OpenEnv

- **ProcureOps AI** (procureops-ai): Rust (Axum/Tokio) + Next.js procurement cockpit enforcing typed purchase mandates and PayPal Sandbox capture/payout reconciliation.
- **Leadforge** (leadforge-career-platform): Multi-user ATS resume & referral platform built on Cloudflare Workers, D1 SQLite, Drizzle ORM, and React 19.
- **AyaWeightDoctor** (AyaWeightDoctor) & **SQL Query Reviewer** (Meta-hackathon): Zero-gradient rank-1 weight surgery on Tiny Aya 3.35B; OpenEnv RL benchmark with shaped rewards across 20 SQL audit tasks.

TECHNICAL SKILLS

Languages	Python, SQL, TypeScript, JavaScript, Rust
AI / ML	NumPy, Pandas, SciPy, Scikit-learn, PyTorch, LLMs
AI Engineering	Hybrid RAG, Embeddings, Tool Calling, Model Context Protocol (MCP), Agent Evaluation
Backend & Data	FastAPI, REST APIs, FalkorDB (Cypher), SQLite, PostgreSQL, Cloudflare Workers & D1
Frontend	React 19, Next.js, Tailwind CSS, Vite
Engineering	Git, GitHub Actions (CI/CD), Docker, Docker Compose, pytest

VERIFIED CERTIFICATIONS & HACKATHONS

AI Fluency: Framework & Foundations — Anthropic (Jul 2026) ID: hfgjbcbbuieb
Claude 101 — Anthropic (Jul 2026) ID: nrhjymrbxwic
Convolve 4.0 Pan-IIT AI/ML Hackathon — IIT Guwahati (Jan 2026) ID: 0587520d-e669-45e4-af1d-90ba7bd35a16
Introduction to Claude Cowork — Anthropic (Jul 2026) ID: e9wrvx2bu8yw
Aspire Leaders Programme — Harvard University (Aspire Institute)
5-Day AI Agents Intensive — Kaggle & Google (Dec 2025) · **BCG Strategy Simulation** (Oct 2025)