AVI MATHUR

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Portfolio | GitHub | LeetCode | LinkedIn

PROFESSIONAL SUMMARY

AI/CSE undergraduate with strong DSA fundamentals and applied experience across Python, machine learning, and full-stack deployment (Docker, FastAPI, Hugging Face Spaces). Meta x PyTorch OpenEnv Grand Finalist among 52,000+ developers. Seeking Specialist Programmer (Trainee) / Digital Specialist Engineer (Trainee) to apply coding and AI/ML depth to enterprise-scale problems.

EDUCATION

B.Tech, Computer Science & Engineering (Artificial Intelligence) Aug 2023 – Jul 2027

Poornima Institute of Engineering & Technology, Jaipur

TECHNICAL SKILLS

Languages	Python, C++, C
DSA & CS Core	Data Structures, Algorithms, System Design, OS, DBMS, Computer Networks
AI / ML	Reinforcement Learning, TensorFlow, LangChain, RAG Pipelines, Generative AI, Pandas, NumPy, Scikit-learn
Web & APIs	FastAPI, Flask, Next.js, REST APIs
Cloud & Deployment	Docker, Streamlit, Hugging Face Spaces, AWS (Certified), Oracle Cloud (Certified), GCP (basics)
Databases	PostgreSQL, MySQL, ChromaDB (vector DB)

EXPERIENCE

Data Science Intern — Celebal Technologies, Jaipur May 2026 – July 2026

- Build ML model pipelines on real-world datasets, covering end-to-end data preprocessing, feature engineering, and model evaluation.

Advanced Software Engineering Virtual Intern — Walmart USA (Forage) Dec 2025 – Jan 2026

- Designed a custom heap data structure to solve a multi-package routing logistics problem, optimizing time complexity for large-scale shipment management.
- Completed engineering challenges spanning algorithm design, system architecture, and relational database schema design, mirroring SDE-1 responsibilities.

Salesforce CRM Intern — Raptbot Technologies, Jaipur Jul 2024 – Aug 2024

- Built Hotel and Bank Management Systems in Salesforce CRM with full workflow automation and relational database design.
- Translated stakeholder requirements into working software configurations, bridging technical and business teams.

PROJECTS

Email Triage RL Environment *[Meta x PyTorch OpenEnv Grand Finalist]* | *Python, FastAPI, Docker, OpenEnv, HF Spaces*

- Designed a three-tier RL benchmark (easy/medium/hard) for email triage agent evaluation with a decomposed reward function (correctness, routing accuracy, efficiency), published as an OpenEnv-compatible Python package.
- Deployed to Hugging Face Spaces with Docker, a client SDK, and Swagger API docs, enabling plug-and-play integration for the RL research community.

RL-Based LLM Judge *[Ongoing Research]* | *Python, Gymnasium, PPO, HuggingFace, Anthropic HH-RLHF*

- Framed LLM response evaluation as a multi-tier RL task over 500+ HH-RLHF preference pairs using a custom Gymnasium environment.
- Decomposed the reward signal into correctness, position-consistency, and length-bias resistance, directly targeting known failure modes of static judges (GPT-4-as-judge, Prometheus-2).

AI Content Moderation Platform | *Next.js, FastAPI, PostgreSQL, Gemini 2.5*

- Built an end-to-end content moderation system combining toxicity scoring via Google Perspective API with AI-generated explanations via Gemini 2.5 Flash.
- Implemented an async FastAPI backend with PostgreSQL to handle concurrent submissions and a Next.js dashboard for real-time flags and explainability cards.

ACHIEVEMENTS & AWARDS

- **Apple Swift Student Challenge 2026 — Winner:** selected among top student developers worldwide for ScanSafe, an on-device allergen scanner for iOS 26 using Apple Intelligence & VisionKit.
- **Meta x PyTorch OpenEnv Hackathon 2026 — Grand Finalist:** ranked among the top teams out of 52,000+ registered developers globally for an RL email-triage benchmark environment.
- **National Hackathons:** led technical teams at SBI Life Hack-AI-Thon and EY Techathon 5.0; participated in Zomathon; volunteered at Smart India Hackathon 2025 Grand Finale.

CERTIFICATIONS

Oracle Cloud Infrastructure 2025 Certified Generative AI Professional • Oracle AI Vector Search Certified Professional • AWS Academy Graduate – Cloud Foundations • McKinsey Forward Program – Learner (Mar–Jun 2026)