

Rudra Gupta

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PROFESSIONAL SUMMARY

AI Engineer with a bias for execution building and shipping production systems end-to-end, from LoRA fine-tuned LLMs achieving **95.3% benchmark accuracy** to agentic pipelines and full-stack platforms. Comfortable moving across any tech stack to solve real problems fast, backed by hands-on experience leading a 50+ member technical chapter as Vice President at UPES-CSA.

EDUCATION

B.Tech in Computer Science and Engineering (AI/ML) UPES, Dehradun CGPA: 8.14/10	2023 – 2027
Senior Secondary (Class XII) K.C. Public School, Jammu Percentage: 82.4%	2022 – 2023
Secondary (Class X) K.C. Public School, Jammu Percentage: 82.17%	2020 – 2021

EXPERIENCE

Research Intern , Bilby.ai Remote (Hong Kong)	Jun 2026 – Jul 2026
- Reverse-engineered SOTA AI agentic harness and developer tooling, including MCP-based tool integration, analyzing architectural patterns, context management strategies, and tool orchestration workflows across multiple systems. - Authored comparative technical research and documentation evaluating agentic engineering systems, enabling the team to assess design trade-offs and adopt informed tooling decisions.	
Research Intern , IIT Jammu Hybrid	Jun 2026 – Jul 2026
- Built a privacy-preserving agentic pipeline with strict data-access guardrails, autonomously generating database algorithms without exposing raw data to the LLM. - Researched knowledge contradictions in RAG pipelines, designing and evaluating multiple conflict-resolution strategies while contributing to broader agentic API-based research initiatives.	
Web Developer Intern , Pi Craft Remote	Jun 2025 – Jul 2025
Developed company website in React.js with reusable components and AVIF asset optimization, significantly boosting page load speed and cross-device performance.	

TECHNICAL SKILLS

- Programming Languages:** Python, Java, SQL
- AI/ML & NLP:** Artificial Intelligence, Machine Learning, Deep Learning, NLP, PyTorch, OpenCV, Hugging Face Transformers, LoRA/PEFT, RAG, FAISS, Sentence Transformers, Agentic Harness Architecture, Tool Orchestration, MCP, Prompt Engineering, Guardrails & Output Validation
- Web Development:** React.js, Node.js, Express.js, FastAPI, REST APIs, HTML/CSS
- Databases:** MongoDB, MySQL, Redis, Vector Databases
- Cloud & DevOps:** Docker, AWS (EC2), Nginx, Git/GitHub, GitHub Actions, Linux
- AI Dev Tools:** GitHub Copilot, Cursor, Claude Code, Codex
- Core Subjects:** Data Structures & Algorithms, OOPs, DBMS, OS, Computer Networks, Software Engineering

PROJECTS

Edu-SLM | Domain-Specific Educational Language Model
Python | PyTorch | LLM Fine-Tuning | RAG | FAISS | Hugging Face Transformers

- Developed a domain-specific educational language model for Operating Systems using RAG-assisted knowledge distillation and LoRA-based fine-tuning on LLaMA and Qwen models.
- Built an automated pipeline for curriculum-based question answering using FAISS vector retrieval, semantic embeddings, and synthetic dataset generation from academic resources.
- Evaluated model performance on a 655-MCQ benchmark, achieving up to **95.3% accuracy** while reducing hallucinations and improving response reliability for academic queries.
- Designed the system for institution-oriented deployment with a focus on low-cost inference, data privacy, and scalable adaptation across academic domains.

UPESCSA.in | Official website of UPES-CSA upescsa.in
MongoDB | Express.js | React.js | Node.js | Docker | REST APIs | Nginx | AWS EC2

- Developed and maintained the official UPES-CSA platform, enabling seamless event registrations, dynamic content management, and technical event operations.
- Deployed and managed the application on AWS EC2 using Docker and Nginx, improving deployment reliability, scalability, and overall website performance.

Agentic AI Fact-Checking Platform | Automated news verification pipeline
Python | FastAPI | LangChain | Groq LLMs | React | TypeScript | MongoDB

- Built an agentic pipeline that decomposes news articles into verifiable claims, gathers evidence via automated web search and scraping, and generates claim-by-claim credibility scores.
- Developed a React frontend to display verdicts and used MongoDB for prompt management and result caching, reducing latency.

POSITIONS OF RESPONSIBILITY

Vice President , UPES-CSA (Cloud Security Alliance) Dehradun	May 2026 – Present
Lead chapter-wide initiatives and cross-functional teams within a 50+ member student community, driving growth and operational efficiency.	
Technical Head , UPES-CSA Dehradun	May 2025 – Apr 2026
Led a 20+ member technical team engineering the MERN-based chapter platform and directed cross-functional operations for AWS Community Day Dehradun (100+ participants).	
Associate Technical Head , UPES-CSA Dehradun	May 2024 – Apr 2025
Mentored 12+ core members on MERN platform and led website, problem statement, and evaluation operations for Hackathon 4.0 (50+ participants).	

ACHIEVEMENTS

- SIH 2025:** Secured a position among the Top 5 teams in the SIH Internal Hackathon 2025.
- Hackathon 4.0 2025:** Led website, problem-statement, and evaluation operations for a national hackathon with 50+ students.
- AWS Community Day Dehradun 2025:** Managed cross-team technical and operational coordination for a cloud community event (100+ participants).
- Entropedia 2.0 & Azure Cloudscape 2024:** Contributed to end-to-end planning, registration workflows, and execution for technical events.