

Raman Lamba

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EDUCATION

Chaudhary Ranbir Singh State Institute of Engineering and Technology
Bachelor of Technology in Computer Science

Jhajjar, HR
July 2021 - May 2025

TECHNICAL SKILLS

Programming Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS

Frameworks: React, Node.js, Express.js, REST API

Developer Tools: Git, Docker, Firebase, Google Cloud Platform, VS Code, PyCharm, IntelliJ, Eclipse

Libraries: Pandas, NumPy, Matplotlib, Scikit-learn, TensorFlow, PyTorch

WORK EXPERIENCE

Teaching Assistant

Coding Blocks, Pitampura, Delhi

Aug 2024 - Feb 2025

- Refined a DSA curriculum of 300+ problems, improving difficulty progression and topic coverage.
- Resolved 600+ technical queries via Discord, decreasing average doubt-resolution time by 25% through structured troubleshooting.
- Mentored 60+ students over 150+ hours, conducting live coding workshops that increased average assignment scores by 18% and maintained an 85% satisfaction rate. Demonstrated leadership by guiding students to academic success.

PROJECTS

MindBloom | [GitHub](#)

April 2025

NodeJS, Pinecone, OpenAI API, React, Mistral AI

- Developed "MindBloom," a full-stack web application with a client-server architecture, ensuring seamless front-end and back-end integration.
- Integrated Pinecone vector database with Hugging Face's 'all-MiniLM-L6-v2' model for efficient semantic search and contextually relevant information retrieval. Driving results by improving search efficiency.
- Designed a context-aware Q&A system using OpenAI's GPT models, enhancing response accuracy and relevance through vector similarity.

MediLlama | [GitHub](#)

April 2025

Python, LoRA, QLoRA, HuggingFace, TinyLlama

- Fine-tuned a 1B-parameter Tiny LLaMA model on a 1,000-line medical conversation dataset, reducing training loss from 2.76 to ~2.50 and validation loss from 2.80 to ~2.71 over 400 steps.
- Evaluated domain adaptation, confirming effective generalization to unseen medical dialogue contexts with a final validation loss of 2.708.
- Optimized training efficiency through hyperparameter tuning and early-stopping, documenting a stable generalization gap (i0.05) to maximize resource utilization. Improved training time by 15%.

Simple RAG Implementation | [GitHub](#)

Mar 2025

Python, OpenAI API, LLM

- Implemented PDF text extraction, chunking, and embedding-based search for efficient queries.
- Utilized Sentence Transformer MiniLM for embedding generation and cosine similarity for relationship identification between chunks.
- Evaluated various LLM models, achieving scores of 1.0 for larger models and 0.8 for older models. Documented model performance.

Other Projects

OEMS, CHIP-8 Emulator, YelpCamp, Java WebServer(Multithreaded)

CERTIFICATIONS

Development: Web Developers BootCamp 2024, DSA(CB), LYFT Backend Virtual Engineering

Network: CISCO Essentials, Cybersecurity Essentials, Cisco Packet Tracer