

Kartavya Sharma

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PROFILE

Motivated Computer Science student with experience in software development, machine learning, and AI system design who applies technical expertise to solve complex problems and deliver scalable solutions. Skilled in Python, JavaScript, generative AI systems, full-stack development, and modern frameworks including ReactJS, LangChain, and PyTorch.

SUMMARY OF QUALIFICATIONS

- Proficient in algorithm design, data structures, and object-oriented programming through academic coursework and projects.
- Skilled in mathematical modeling and statistical analysis with applications in engineering and computer science.
- Experienced in digital system design, computer organization, and assembly programming, connecting hardware and software concepts.
- Strong technical collaborator with proven ability to design and implement projects integrating programming, problem-solving, and data analysis.
- Quick learner with demonstrated adaptability across diverse coursework and technical domains.

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, JavaScript, C, C++, HTML, CSS, x86 Assembly, Linux.
- **Systems/Libraries:** SciPy, NumPy, Pandas, Matplotlib, PyTorch, ReactJS, Git/Github.
- **Areas of Expertise:** Algorithms, Data Structures, Object-Oriented Programming, Computer Architecture, Digital Logic Design, Machine Learning, Systems Design, Automata, Software Engineering, Artificial Intelligence.

EDUCATION

Bachelor of Science in Computer Science - Texas Tech University, Lubbock, TX Fall 2026

- **GPA:** 3.4
- **Awards:** Dean's List Spring 2025, Fall 2025

Accelerated Master of Science in Computer Science – Texas Tech University, Lubbock, TX Fall 2027

- **GPA:** 4.0

PROJECTS

Embedding Model Project (Python, HuggingFace, ChromaDB, LangChain, ChatGroq) – Google Developer Groups, TTU, Lubbock, TX Sept 2024

- Built a document embedding pipeline using HuggingFace embeddings and Chroma DB for efficient vector storage and retrieval.
- Implemented text preprocessing with recursive character splitting and PDF/text loaders.
- Developed a retrieval-based Q&A system leveraging LangChain and ChatGroq for some semantic search and context aware responses.
- Designed custom prompt templates to improve retrieval accuracy and chatbot performance.

Generative AI RAG BOT (Python, LangChain, Groq, LLMs, ChromaDB, HuggingFace) – Independent Project, Lubbock, TX Oct 2024

- Created a Retrieval-Augmented Generation (RAG) chatbot integrating LangChain and Groq LLMs. Connected vector embeddings with document retrieval to provide accurate context-driven answers.
- Engineered scalable architecture for real-time questions answering custom datasets.
- Enhanced system reliability by modularizing loaders, retrievers, and conversational chains.

ACTIVITIES / CERTIFICATIONS

Member – Google Developer Group, TTU, Lubbock TX Oct 2023 - Present

- Participated in meetings and collaborative coding projects, gaining exposure to industry tools and software development

Member – Indian Student Association, TTU, Lubbock TX Aug 2023 - Present

- Engaged in community events and team activities, fostering collaboration and cultural exchange with peers.

Microsoft Excel & Word Certification – Microsoft Office Specialist May 2023

- Proficient in advanced data analysis, reporting, visualization, and business intelligence dashboards.

Google Cloud Skills AI Boost – Google Cloud Platform Jul 2024

- Completed hands-on-labs and projects on AI/ML tools and services in Google Cloud.