SHRIANSH MANHAS

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With a strong foundation from Georgia Tech, I specialize in large language models, retrieval-augmented generation (RAG), and data analytics. I have experience optimizing AI algorithms, building scalable ETL pipelines, and securing data with advanced encryption. My work includes designing RAG systems to improve LLM accuracy and co-authoring research on AI data security. Skilled at clear communication and cross-disciplinary collaboration, I am well-equipped to contribute to teams driving innovation in LLMs and data-centric AI.

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY - MSCS	**GPA (current):** 3.75/4.0, Expected graduation - Dec 2025
NATIONAL INSTITUTE OF TECHNOLOGY, DELHI - BSCS	**GPA**: 8.12, Graduated: May 2024

INTERESTS AND SKILLS

Interests: Machine Learning, LLMs, Security, Software Engineering, Cloud Architecture, Data Science, Data Mining
Languages: C, C++, Python, Java, SQL, CUDA; ***Frameworks***: Pandas, Numpy, Tensorflow, Pytorch, Peft, LangChain, Huggingface
Tools: Bash, Spark, SQL, AWS, Azure, Linux, Kubernetes, Jenkins, Docker, Tableau, Power BI, Django, N8N, Blender

WORK/RESEARCH EXPERIENCE

SP TECH (Creating growth-driven digital environments powered by Salesforce) Atlanta, USA
Junior AI Developer May 2025 – Aug 2025

- ***Supervisor***: Mr. Neeraj Parikh
- **Led a team of 3 interns**, completing 100% of sprint deliverables on time, improving release velocity by 30%."
- Developed an **MCP server for a context-aware Slack bot** for summarization, availability checks, smart scheduling, and real-time Q&A—integrated enterprise-grade security (OAuth 2.0, RBAC, channel isolation) with a scalable PostgreSQL infrastructure hosted on Glama.
- Cut stale query responses by 40% by implementing **a self-refreshing RAG pipeline**, improving accuracy in financial queries. The system refreshes in real time on updates to the database, ensuring up-to-date responses and reducing stale or inconsistent outputs in financial queries.

SKIT.AI (Conversational voice AI solution provider in the accounts and receivables Industry) Bangalore, India
Software Developer Intern May 2023 – Aug 2023

- ***Supervisor***: Mr. Akshay Deshraj
- Built **ETL functionality** in the Docker pipeline to insert custom datasets for testing the LLM architecture instead of doing the train-test split, thus making debugging easier for MLOps in an Agile environment.
- Adding a fork from the component reduced error detection time by 16% for the NLP system

UNIVERSITY PROJECTS

CYCLIC PRECISION OPTIMIZATION(link) Feb 2025

- GPT-2 Fine-Tuning on SQuAD. How do I increase Fine Tuning efficiency of a model while ensuring it remains light weight?
- Trained the Model using LoRA, frozen weights. Evaluation compares Cyclic Precision to multiple forms of Dynamic Quantization.
- Resulted in a 14.4% increase in F1, 15% increase to EM with the tradeoff being Efficiency drop of 4.7%.

DND-DUNGEON MASTER (link) May 2025

- Designed and developed a fully autonomous AI Dungeon Master for Dungeons & Dragons campaigns.
- Focused on procedural world generation, dynamic story arcs, and real-time interaction.
- Leveraged a **locally quantized GPT-2** model fine-tuned via LoRA and deployed through a custom RAG pipeline.
- Integrated vector database (PostgreSQL) for efficient semantic search of in-game lore and prior events.

OPTIMAL DECISION TREE FOR PACKET CLASSIFICATION (link) Nov 2024

- Implemented an open-source Genetic Algorithm to evolve decision tree structures. Represent trees as genomes, and implement genetic operators like crossover and mutation to generate efficient tree structures over iterations
- Outperforms prefix-based decision trees matches against packet header fields

DETECTING AI-GENERATED SCIENTIFIC PAPERS(IBM) (link) Oct 2023

- Employed Bidirectional Transformers model (BERT) for NLP
- Modified the model by pruning the unnecessary layers using magnitude pruning, zeroing out the non-significant weights, and fitting the dataset, which was tokenized, cleaned, and preprocessed
- This model broke into the top 5 of the Detecting generated scientific papers competition