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EDUCATION

University of Wisconsin-Madison

Sep 2023 – May 2025 (Expected)

Master of Science - Computer Sciences; CGPA: 3.804 / 4.0

Madison, WI

Courses: Intro to AI, Advanced NLP, Foundational Models, Big Data, Data Clean & Integration for Data Science.

SSN College of Engineering (Affiliated to Anna University)

Sep 2018 – May 2022

B.Tech in Information Technology; CGPA: 8.95 / 10.0

Chennai, India

EXPERIENCE

Graduate Research Assistant

Sep 2024 – Present

University of Wisconsin – Madison

Madison, WI

- Designed a system to process and ingest **80k+** medical documents, efficiently chunking and generating embeddings.
- Developed a **RAG** pipeline tailored for radiology reports, enabling clinicians to gain enhanced diagnostic insights.

Autonomous System Research Intern

Jun 2024 – Aug 2024 (2 Mos)

Nokia Bell Labs

Murray Hill, NJ

- Leveraged **LangChain**, **LangGraph** and **Prompt Engineering** techniques to develop a **multi-agent system** for problem-solving.
- Visualized and deployed the **multi-agent system** using **streamlit** to interact and demonstrate their capabilities.

Master's Research

Sep 2023 – May 2024 (8 Mos)

University of Wisconsin – Madison

Madison, WI

- Evaluated and ran benchmark tests on **LLMs** with different configurations on various hardware platforms.
- Our work was accepted for publication as part of **ICLR, Singapore, 2025**.

Qualcomm

Jul 2022 – Jul 2023 (1 Yr)

Associate Engineer – AI/ML

Hyderabad, India

- Introduced evaluation frameworks and metrics for ML models to enhance efficiency and accuracy by **10.26%**.
- Ran inference and benchmark tests using SNPE (SnapDragon Neural Processing Engine), based on OEM requests.

Machine Learning Intern

Mar 2021 – Jun 2022 (1 Yr 4 Mos)

Mad Street Den (Vue.ai)

Chennai, India

- Formulated an OCR/NLP-based document processing tool to convert unstructured data for workflow automation.
- Our efforts reduced document processing time by **37%** and achieved an accuracy of **85%**.

Undergraduate Research Assistant

Feb 2020 – Jun 2022 (2 Yrs 5 Mos)

Bright Academy (Previously Solarillion Foundation)

Chennai, India

- Led NLP team translating German sign language weather videos into accurate German sentences.
- 30.88%** fewer model parameters than the SOTA, **98.19%** and **86.65%** retention for **ROUGE-L** and **BLEU-4**.

SELECTED PROJECTS

Relationship Extraction using Large Language Models

🐙 Repo

- Extracting complex relationships between entities from unstructured text data, by fine-tuning **Llama3.2 LLM**.

Optimizing Natural Language Understanding: Fine-tuning Mistral 7B

🐙 Repo

- Fine-tuning **Mistral 7B LLM** on the Samantha dataset to conversational and contextual question answering.

TECHNICAL SKILLS

GenAI Competencies: ML, AI, NLP, CV, LLMs, RAG

Programming Languages: Python, C, C++

Frameworks & Tools: PyTorch, TensorFlow, Keras, LangChain, LangGraph, Spark, Git, Docker, SQL, AWS, GCP

Libraries: NumPy, pandas, matplotlib, scikit-learn, streamlit, NLTK, spaCy, OpenCV

SELECTED PUBLICATIONS

Palmbench: A comprehensive benchmark of compressed Large Language Models on mobile platforms

The Thirteenth International Conference on Learning Representations (ICLR), Singapore, 2025

Sign Language Translation using Multi Context Transformer

20th Mexican International Conference on Artificial Intelligence (MICA), Mexico City, 2021