BADRI NARAYANAN MURALI KRISHNAN

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EDUCATION

University of Wisconsin-Madison

Sep 2023 – Dec 2024 (Expected)

Master of Science - Computer Sciences; CGPA: 3.65 / 4.0

Madison, WI

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

SSN College of Engineering (Affiliated to Anna University)

Aug 2018 - May 2022

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

Chennai, India

SKILLS

Programming Languages

Python, C, C++

Frameworks and Tools Libraries PyTorch, TensorFlow, Keras, LangChain, Spark, Git, Docker, SQL, AWS NumPy, pandas, matplotlib, scikit-learn, streamlit, NLTK, spaCy, OpenCV

WORK EXPERIENCE

Graduate Research Assistant

Sep 2024 - Present

University of Wisconsin - Madison

Madison, WI

- \rightarrow Implementing **RAG** and fine-tuning **LLMs** on radiology reports for enhanced diagnostic insight.
- → Working to deploy and host fine-tuned LLMs, improving the accessibility and accuracy of radiological analysis.

Autonomous System Research Intern

 $Jun\ 2024 - Aug\ 2024\ (2\ Mos)$

Nokia Bell Labs

Murray Hill, NJ

- → Leveraged LangChain and Prompt Engineering techniques to substantiate LLM planning & reasoning power.
- \rightarrow Visualized and deployed the **multi-agent system** using **streamlit** to interact and demonstrate their capabilities.

Associate Engineer - AI/ML

Jul 2022 – Jul 2023 (1 Yr)

Qualcomm

Hyderabad, India

- \rightarrow 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

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

Part-Time Undergraduate Research Assistant

Feb 2020 – Jun 2022 (2 Yrs 5 Mos)

Bright Academy (Previously Solarillion Foundation)

Chennai, India

- ightarrow Led NLP team translating German sign language weather videos into accurate German sentences.
- \rightarrow 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 Language Models Github

Oct 2024 - Dec 2024

 \rightarrow Extracting complex relationships between entities from unstructured text data, leveraging language models.

Optimizing Natural Language Understanding: Fine-tuning Mistral 7B Github

Feb 2024

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

Terms of Service Classification Github

May 2022 - Jun 2022

 \rightarrow Identify unfair Terms of Service clauses using a two-stage knowledge distillation DL algorithm.

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 Publication Github

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

Paper published in Springer Lecture Notes in Artificial Intelligence (LNAI) proceedings.