BADRI NARAYANAN MURALI KRISHNAN

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EDUCATION

University of Wisconsin-Madison   **Sep 2023 − May 2025 (Expected)**
Master of Science - Computer Sciences; **CGPA: 3.803 / 4.0**   Madison, WI
<u>Relevant Courses</u>: 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	PyTorch, TensorFlow, Keras, LangChain, Spark, Git, Docker, SQL, AWS
Libraries	NumPy, pandas, matplotlib, scikit-learn, streamlit, NLTK, spaCy, OpenCV

WORK 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** and **Prompt Engineering** techniques to substantiate **LLM** planning & reasoning power.
→ 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*
→ 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.
→ 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 Github   **Oct 2024 - Dec 2024**
→ Extracting complex relationships between entities from unstructured text data, by fine-tuning **Llama3.2 LLM**.
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**
→ 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.