

BADRI NARAYANAN MURALI KRISHNAN

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EXPERIENCE

Founding AI / ML Engineer

Sep 2025 – Present

CuroNow

Madison, WI

- **Architected** an **AI agent** to provide reliable medication safety insights using **LLM reasoning** & fallback handling.
- Built a **centralized AI microservice** with **caching** to eliminate **duplicate LLM calls** & **reduce API costs**.

AI / ML Engineer - Contract Role

Jun 2025 – Sep 2025

BrainWaves Digital

Remote, USA

- **Led the development** of a **Finance Agent** from **scratch** to extract data & insights effectively.
- Deployed a **multi-model AI** stack comprising Gemini 2.5 Pro/Flash, GPT-4 with intelligent fallback mechanisms.
- Created a dashboard with **ReactJS**, **Supabase SSO** & **Firestore** to visualize the cash flow, balances, & transactions.

Graduate Research Assistant

Sep 2024 – May 2025

University of Wisconsin – Madison

Madison, WI

- Designed a scalable ingestion system for **80k+** medical documents, optimizing chunking, embedding, and retrieval.
- Developed an **Agentic RAG** pipeline tailored for radiology reports, enabling clinicians to gain diagnostic insights.
- Generated document embeddings and stored them in a **Vector DB**, serving **locally hosted LLMs** via **Ollama**.
- Established an evaluation framework using **NDCG@5**, achieving a score of **0.857** on **1K+** radiology reports.

Autonomous System Research Intern

Jun 2024 – Aug 2024

Nokia Bell Labs

Murray Hill, NJ

- Constructed a **multi-agent system** leveraging **autonomous agents** for adaptive learning & collaborative reasoning.
- Coordinated agent workflows with an **Orchestrator LLM** and **Chain-of-thought** prompting for multi-step planning and optimization. Agents executed specialized tasks via **tool-calling interfaces**.
- Built the framework with **LangGraph** & **Streamlit** to visualize agent interactions and analyze emergent behaviors.

Associate Engineer – AI/ML

Jul 2022 – Jul 2023

Qualcomm

Hyderabad, India

- Introduced evaluation frameworks and metrics for ML models to enhance efficiency and accuracy by **10.26%**.
- Benchmarked **quantized** and **pruned models** on **Snapdragon SoCs** to assess latency, throughput, and power consumption under production workloads on SNPE (SnapDragon Neural Processing Engine).

TECHNICAL SKILLS

GenAI Competencies: GenAI, LLMs, RAG, Multi-Agent Systems, Prompt Engineering, Vector DB, ML

Programming Languages: Python, C, C++

Frameworks & Tools: PyTorch, TensorFlow, LangChain, LangGraph, Spark, Git, Docker, Azure, AWS, GCP, CI/CD

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

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 for conversational and contextual question answering.

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 (MICAI), Mexico City, 2021

EDUCATION

University of Wisconsin-Madison

Sep 2023 – May 2025

Master of Science - Computer Sciences; CGPA: 3.827 / 4.0

Madison, WI

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

SSN College of Engineering (Affiliated to Anna University), Chennai, India

Sep 2018 – May 2022

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

Chennai, India