

BADRI NARAYANAN MURALI KRISHNAN

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EXPERIENCE

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| Founding AI / ML Engineer <i>CuroNow</i> | Sep 2025 – Present | <i>Madison, WI</i> |
| • 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 <i>BrainWaves Digital</i> | Jun 2025 – Sep 2025 | <i>Remote, USA</i> |
| • Lead engineer in creating a Bank Statement Processing Engine from scratch to extract financial data & insights. | | |
| • 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 & Firebase to visualize the cash flow, balances, & transactions. | | |
| Graduate Research Assistant <i>University of Wisconsin – Madison</i> | Sep 2024 – May 2025 | <i>Madison, WI</i> |
| • 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 <i>Nokia Bell Labs</i> | Jun 2024 – Aug 2024 | <i>Murray Hill, NJ</i> |
| • 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 <i>Qualcomm</i> | Jul 2022 – Jul 2023 | <i>Hyderabad, India</i> |
| • 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-Agentic 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

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

Optimizing Natural Language Understanding: Fine-tuning Mistral 7B

- 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

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| University of Wisconsin-Madison | Sep 2023 – May 2025 | <i>Madison, WI</i> |
| <i>Master of Science - Computer Sciences;</i> CGPA: 3.827 / 4.0 | | |
| <i>Courses:</i> 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 | |
| <i>B.Tech in Information Technology;</i> CGPA: 8.95 / 10.0 | | <i>Chennai, India</i> |