PALEM BHARATH LINGA REDDY

palembharathlingareddy@gmail.com | +91 9182154751 | LinkedIn | GitHub | Kurnool, AP

EDUCATION

ICFAI University, Hyderabad *06/2023 – 05/2027*
B.Tech in Computer Science (Data Science & AI) *CGPA: 8.27*

PROFESSIONAL SUMMARY

AI/ML developer with internship and project experience in Python, React.js, natural language processing (NLP), and agent workflows. Built conversational analytics applications with FastAPI, including a no-code interface for data analysis and model training.

INTERNSHIPS & EXPERIENCE

VISWAM.AI *Jun 2025 – Aug 2025*
AI Intern – Summer Internship

MCP-Powered Personal Finance AI Assistant GitHub

- Built an AI assistant using **Model Context Protocol (MCP)** with **30+ tools**, integrating an NVIDIA LLM for expense categorization and natural language financial queries.
- Implemented budget alerts, income analytics, CSV exports, and soft deletes using **Turso**; deployed on **Horizon** and integrated with **ChatGPT**.

NLP Educational Applications

- Built **TriviaVerse**, a Wikipedia-powered NLP quiz app deployed on **Hugging Face Spaces**, and developed educational tools using **Streamlit** and **Hugging Face Transformers**.

AICTE – Edunet Foundation (Microsoft Initiative) *Apr 2025 – May 2025*
AI Intern – Foundations of AI

Brain MRI Tumour Classification & Explainability GitHub | Live Demo

- Developed a **four-class MRI classifier** using **PyTorch CNNs** with **Optuna**-based hyperparameter tuning.
- Implemented **SmoothGrad** heatmaps, batch prediction, and CSV exports; validated application workflows with **24 regression tests**.
- Deployed on **Streamlit Community Cloud** with PBKDF2 authentication, role-based access, prediction history, and an admin dashboard.

PROJECTS

Data Agent – LLM-Powered No-Code Analytics & AutoML GitHub

- Developed a **no-code analytics application** with **React.js** and **FastAPI** for CSV/Excel profiling, versioned cleaning, model training, and PDF/PowerPoint reporting.
- Integrated **Gemini, GPT-OSS, and NVIDIA Nemotron** through task-based API routing and fallback to support **natural-language queries** and analytical interpretations.
- Built classification and regression pipelines using **scikit-learn** and **Optuna**, with fold-specific preprocessing, cross-validation, and separate holdout evaluation.

Multimodal RAG Chatbot with Fine-Tuned LLM GitHub

- Developed an end-to-end **multimodal RAG** system using ChromaDB to parse, embed, and retrieve context from academic PDFs and architectural diagrams.
- Generated **160+ synthetic JSON training pairs** via NVIDIA Mistral Large APIs; fine-tuned **Meta LLaMA-3.1-8B** with **QLoRA (4-bit)** and Unsloth on Lightning AI cloud GPUs.
- Built a unified inference pipeline routing queries between the fine-tuned LLM and a multimodal Vision API fallback based on vector metadata.

TECHNICAL SKILLS

- **Programming Languages**: Python, C, C++
- **Web & App Frameworks**: React.js, FastAPI, Streamlit
- **Machine Learning & NLP**: PyTorch, scikit-learn, Hugging Face Transformers
- **LLM & Agent Frameworks**: LangChain, LangGraph, CrewAI, Model Context Protocol (MCP)
- **Databases & ORM**: MySQL, MongoDB, SQLAlchemy
- **Tools**: Git, Docker, Jupyter Notebook

CERTIFICATIONS

- Machine Learning Specialization (Coursera)
- Exploratory Data Analysis for ML (Nasscom)
- Generative AI with LangChain & HuggingFace (Udemy)
- MCP: Build Agentic AI Apps (Udemy)
- Google AI Essentials (Coursera)