BUKKA SANJAY

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OBJECTIVE

Innovative AI Engineer specializing in **Agentic AI**, **Generative AI**, and **Large Language Models (LLMs)**. Passionate about building intelligent systems that transform enterprise workflows through automation and multi-agent architectures. Proven expertise in developing scalable RAG pipelines, multimodal AI systems, and full-stack AI applications using modern frameworks like **CrewAI**, **LangChain**, and **FastAPI**. Seeking to leverage cutting-edge AI technologies to solve complex real-world problems and drive innovation.

EDUCATION

Bachelor of Technology in Computer Science (AI & ML)   3.61/4 CGPA
Woxsen University, Hyderabad

SKILLS

Agentic AI:	CrewAI, LangChain, LangGraph, AutoGen, Agno, n8n
Generative AI:	LLMs (Gemini, OpenAI), RAG Pipelines, Vector Databases (ChromaDB, FAISS, Pinecone)
AI & ML:	PyTorch, TensorFlow, Scikit-learn, Transformers, Computer Vision, NLP
Backend:	FastAPI, Flask, REST APIs, MongoDB, MySQL
DevOps & Tools:	Docker, Git, GitHub, AWS, CI/CD, VS Code

EXPERIENCE

Backend Developer — AI Research Centre, Woxsen University   Feb 2025 – April 2025
- Contributed to backend design of Woxsen ERP system.
- Developed student data management with CSV upload and role-based access.
- Built REST APIs for program management and admin workflows.
- Integrated MongoDB for efficient data handling.

PROJECTS

LeadAgentForge – GitHub
- Developed an **AI-powered Team Lead Management Platform** utilizing **Multi-Agent Orchestration** with **CrewAI** and **LangChain**.
- Implemented **4 Specialized Agents** (Document, Stack, Team, Task) to automate team formation, document analysis, and project planning.
- Integrated **RAG (Retrieval-Augmented Generation)** with **ChromaDB** for intelligent document processing and context-aware responses.
- Built a real-time streaming chat interface using **Server-Sent Events (SSE)** and optimized performance with **LLM Caching**.
- *Tech Stack: Python, FastAPI, React, TypeScript, MongoDB, Google Gemini API.*

Academic Research Assistant – GitHub
- Engineered a comprehensive research ecosystem streamlining paper discovery, gap analysis, and academic writing.
- Implemented **Semantic Search** using **SciBERT embeddings** and a **Research Gap Analyzer** with **KeyBERT** and PCA visualization.
- Developed a **Q&A Assistant** using **FAISS** and **LangChain** for context-aware queries over uploaded PDFs.
- *Tech Stack: Python, Streamlit, Gemini Pro, SciBERT, FAISS, Plotly.*

Multimodal Mental Health AI – GitHub
- Built a robust deep learning system for mental health state detection (Depression, Anxiety, Normal) achieving **88.89% accuracy**.
- Utilized **Multimodal Data Fusion** combining Text (**DistilBERT**), Audio (**Librosa** features), and Physiological signals.
- Implemented advanced data augmentation strategies for all modalities to ensure model robustness.
- *Tech Stack: TensorFlow, Transformers, Librosa, Pandas, Scikit-learn.*

PUBLICATIONS & PATENTS

- **Patent Holder**: Solar Tracking System for Energy Efficiency.
- **Patent Holder**: Comprehensive Wheel Integrity Monitoring System (CWIMS).
- **Book Chapter Author**: "IoT Applications" published by **Taylor & Francis Group**.

ACHIEVEMENTS & RESPONSIBILITIES

- **Winner**, DigiTech Hackathon (Project: ResumeRanker).
- **Runner-Up**, National Generative AI Hackathon.
- **Vice President**, Baudhik Club: Led IPR initiatives and conducted AI/ML seminars for students.
- **Participant**, Amazon ML Challenge.