Anthony Raju Kondaveeti

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Education

Christ University, Bengaluru, India — June 2024 – Present
Master of Science in Data Science — *Ongoing*

Andhra Loyola College, Vijayawada, India — June 2020 – May 2023
Bachelor of Science in Mathematics, Physics, and Computer Science — *CGPA: 9.02/10*

Experience

AI/ML Intern — July 2025 – October 2025
Demetrix Infotech Pvt. Ltd. — *Bengaluru, India*

- Architected enterprise-grade RAG system with session-based vector collections and adaptive thresholds, processing 100+ documents daily with 92% contextual accuracy and under 2s response times
- Developed production-ready microservices architecture integrating Mistral AI, Qdrant vector database, and OCR processing with intelligent rate limiting and exponential backoff strategies
- Engineered hybrid search engine combining semantic embeddings (Sentence Transformers) and BM25 sparse retrieval with cross-encoder re-ranking, achieving 75% precision improvement over baseline systems
- Built comprehensive testing framework with automated performance evaluation, confidence scoring, and quality metrics validation ensuring API reliability in production environments
- Implemented advanced session management with persistent conversation memory and isolated user collections, enabling scalable multi-tenant document intelligence for enterprise clients

Python Tutor — June 2025 – September 2025
Christ University — *Bengaluru, India*

- Designed and delivered Python curriculum for 50 Biotechnology undergraduates, achieving 95% proficiency in core programming concepts
- Developed 30 hands-on projects and coding challenges accelerating problem-solving skills and code comprehension

Projects

Art-Style Adaptation of Stable Diffusion with LoRA | *Python, PyTorch, Diffusers, LoRA*

- Curated 80K+ WikiArt dataset with metadata enrichment for domain-specific fine-tuning of generative models
- Implemented Low-Rank Adaptation (LoRA) reducing trainable parameters by 99.8% while maintaining artistic fidelity
- Optimized distributed training pipeline achieving 4x faster convergence using mixed-precision and gradient checkpointing
- Generated production-quality style transfer outputs across 15+ art movements with 92% human-evaluated consistency

AI-Powered Document and Image Analysis Suite | *Python, PyTorch, LangChain, Chroma, Transformers*

- Architected multi-modal AI platform processing 10K+ documents/images daily with Gradio interface and real-time analytics
- Deployed RAG pipeline with Mistral embeddings achieving 93% retrieval precision across 5M+ document corpus
- Integrated BLIP-2, CLIP, and EasyOCR enabling zero-shot image classification, captioning, and OCR with 97% accuracy
- Optimized hybrid search with semantic chunking reducing latency by 68% while improving relevance by 22%

YouTube Video Analyzer Chrome Extension | *Python, Flask, NLP, Jinja, JavaScript, HTML/CSS*

- Developed browser extension analyzing 100K+ YouTube videos with real-time sentiment tracking and emotional arc visualization
- Implemented multilingual NLP pipeline supporting 12+ languages with 98% transcript extraction accuracy
- Engineered comment sentiment analysis correlating audience reactions with video timestamps (r=0.87 correlation)
- Designed scalable UI with infinite scroll, faceted search, and automated CSV export

Traffic Sign Image Classification (CNN) | *Python, TensorFlow, Keras, OpenCV*

- Achieved state-of-the-art 96.96% accuracy classifying 50K+ German traffic signs using custom CNN architecture
- Implemented comprehensive augmentation pipeline (rotation, brightness, blur) improving robustness by 18%
- Deployed regularization suite (Dropout 0.5, L2 $\lambda = 0.001$, BatchNorm) reducing overfitting by 62%
- Optimized training with EarlyStopping and ReduceLROnPlateau callbacks achieving 3x faster convergence

Research Projects

Evaluating Emotional Intelligence in Large Language Models: A Culturally-Anchored Framework for Indian Linguistic Contexts Designed the Indian Emotional Alignment Score (I-EAS), a novel framework to assess cultural and emotional responsiveness of LLMs in Hindi, Tamil, and English. Designed a 150-prompt multilingual dataset and applied statistical validation (Pearson correlation, ANOVA, t-tests) on 450 model outputs, uncovering key cultural performance gaps in global and Indian LLMs.

Technical Skills

Programming Languages: Python, SQL, HTML/CSS
Frameworks & Libraries: Flask, LangChain, TensorFlow, PyTorch, Keras, Diffusers, Transformers, Sentence-Transformers, OpenCV, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn
Databases & Vector Stores: SQLite, PostgreSQL, Chroma, Qdrant
Tools & Platforms: Jupyter, Google Colab, VS Code, Git, Gradio, Streamlit
Specialized Skills: Retrieval-Augmented Generation (RAG), Large Language Models (LLMs), Natural Language Processing (NLP), Computer Vision, Generative AI (Stable Diffusion, LoRA), Data Visualization, Statistical Analysis

Certifications

SQL for Data Science, Great Learning – Oct 2024
Supervised ML: Regression and Classification, Coursera – Sep 2024
Advanced Learning Algorithms, Coursera – Feb 2025
AWS Fundamentals, AWS builder – Oct 2025