Aniruddha H D

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PROFESSIONAL SUMMARY

Built and deployed deep learning models for healthcare and finance use cases, including LLM fine-tuning for medical QA and AI-powered expense categorization. Developed scalable backend systems using Python, Django, and FastAPI, and delivered full-stack applications with real-time analytics and automation features.

EXPERIENCE

Deep Learning and MLOps Intern · May 2024 – Dec 2024
Basava Pracheena Vaidya Anveshana Pvt Ltd. · *Bengaluru, Karnataka*

- Engineered a scalable deep learning model utilizing YOLO and CNN frameworks on AWS SageMaker, achieving a 15% improvement in tongue diagnosis accuracy and a 20% in pulse diagnosis accuracy.
- Supported the deployment of ML models using tools like Docker and basic MLOps workflows using AWS EC2.
- Standardized data preprocessing pipelines using Python and Pandas, decreasing model training time by 15% and improving the accuracy of tongue diagnosis models by 8% on a dataset of 2,700 images.

PROJECTS

AI-Powered Expense Management | *Python, Flask, Transformers, SQLAlchemy*

- Developed a full-stack financial tracker using Flask and React, integrating Hugging Face Transformers for 85% accurate expense categorization on 500 sample entries.
- Applied ML model on 3 months of mock data to generate budget suggestions, improving savings accuracy by 10%.
- Built a secure REST API with JWT and SQLAlchemy, enabling auto-categorization and forecasting with 90% uptime in local Docker deployment.

Leaf Disease Detection System | *Python, TensorFlow, FastAPI, Flask, Docker*

- Trained a CNN using TensorFlow on 3,076 images in PlantVillage dataset, achieving 92% accuracy in classification.
- Deployed the plant classifier as a FastAPI service and built a lightweight Flask UI for real-time predictions under 1 second latency.
- Dockerized the project into two containers: one for the model API and another for the UI, enabling seamless interaction between the frontend and backend.

RD Sharma Question Extraction Pipeline | *Python, Flask, PyMuPDF, Transformers, LaTeX*

- AI-powered pipeline that extracts mathematical questions from RD Sharma Class 12 textbook using OCR and LLM processing with 96.8% average confidence.
- Built a responsive web interface with real-time processing that extracts 560+ questions per chapter in under 3 minutes with professional LaTeX output.
- Implemented advanced OCR fallback using Tesseract and EasyOCR to handle scanned PDFs, achieving 95%+ text extraction accuracy across 102 pages.

TECHNICAL SKILLS

Languages: Python
Frameworks: Flask, Django, FastAPI, TensorFlow, PyTorch
Developer Tools: Git, Docker, Kubernetes (basic), AWS (EC2, S3, SageMaker), VS Code.
Libraries and ML Tools: NumPy, pandas, Scikit-Learn, TensorFlow, PyTorch
MLOps Tools: MLflow
Cloud AI/ML Tools: AWS SageMaker

CERTIFICATIONS

Deep Learning Specialization : By Andrew Ng, Deeplearning.ai

Machine Learning Specialization : By Andrew Ng, Deeplearning.ai, Stanford University

Mathematics for Machine Learning and Data Science Specialization : By Luis Serrano, DeepLearning.ai

EDUCATION

Jyothy Institute of Technology · Bengaluru, Karnataka
Bachelor of engineering in Artificial Intelligence and Machine Learning ; CGPA: 7.74 · *2021 – 2025*