POORNA MANIKANTA KANDIBOINA

Machine Learning Engineer (Entry Level)

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Professional Experience

Central Reserve Police Force (CRPF) 2021-2025

- Worked in disciplined, high-responsibility environments requiring strong problem-solving, accountability, and operational reliability
- Collaborated within structured, process-driven systems under time-critical and high-pressure conditions
- Transitioned into AI/ML through structured self-learning and hands-on engineering projects, applying analytical thinking and engineering discipline

Technical Skills

- Programming&Data: Python, SQL, Pandas, NumPy
- MachineLearning: SupervisedLearning,Regression,Classifi-cation, Feature Engineering, Model Evaluation, Hyperparameter Tuning
- DeepLearning&CV: ANN,CNN,Mobilenet,Image Classification
- NLP&GenAI: RNN,LSTMRNN,GRU,Transformers,BERT, RAG,Embeddings,Vector Databases
- MLOps&Deployment: AWS(EC2, ECR), Docker, GitHub Actions, CI/CD, Streamlit

Tools &Technologies

- Docker, Git, GitHub
- AWS EC2, ECR
- Tensorflow, Keras
- SQL, Pandas, NumPy, Scikit-Learn
- Power BI

Education

- Bachelor of Technology in ELECTRICAL & ELECTRONICS ENGG. (2019)
- Diploma in ELECTRICAL & ELECTRONIS ENGG.(2016)

languages

English
Hindi
Telugu

Professional Summary

Machine Learning Engineer – Entry Level with practical experience building and deploying ML and GenAI systems through real-world, production-style projects involving AWS, Docker, and CI/CD pipelines.Strong foundation in data analysis, feature engineering, model training, evaluation, and optimization across ML, Deep Learning, Computer Vision, and NLP use cases.Career transitioner with a disciplined engineering background, actively seeking an entry-level ML/AI role to contribute to scalable, real-world AI solutions.

Practical Experience

1.Student Performance Prediction System (End-to-End ML AWS | CI/CD)

- Tech: Python, SQL, Scikit-Learn, Docker, GitHub, AWS EC2, ECR, CI/CD
- Built a full end-to-end Machine Learning system to predict student academic performance
- using regression models
- Performed EDA,feature engineering,model training, hyperparameter tuning, and evaluation
- Trained and compared multiple regression models (Linear, Ridge, Lasso, Random Forest, Gradient Boosting)
- Achieved best model performance of ~0.92 R^2 score on test data
- Implemented CI/CD pipeline using GitHub as source
- Containerized the application using Docker and deployed on AWS EC2 with ECR
- Designed the project following production-grade ML architecture

2.CNN Binary Image Classification System (Computer vision | Deep Learning

- Tech: Python, TensorFlow, Keras, CNN, MobileNet, Streamlit, Docker
- Built a binary image classification system from scratch using CNN
- Initial Custom CNN model achieved 56–60% accuracy
- Designed and trained an optimized CNN architecture, improving accuracy to~70–80%
- Applied Transfer Learning using MobileNet, achieving improved validation accuracy through transfer learning
- Clearly Demonstrated model improvement through architecture optimization
- Deployed the trained model as an interactive Streamlit web application

3. RAG-Based PDF Chatbot (GenAI | NLP)

- Tech: Python, LLMs, Embeddings, Vector Databases, RAG, NLP
- Developed a Retrieval-Augmented Generation (RAG) chatbot for PDF-based question answering
- Implemented document ingestion, text chunking, embedding generation, and vector search
- Integrated retrieved context into LLM prompts to produce accurate, grounded responses
- Reduced hallucinations compared to standard LLM chatbots
- Built an end-to-end GenAI pipeline suitable for real-world enterprise use cases
- Designed for scalable enterprise knowledge-assistant applications