

JWALA KUMAR

Machine Learning Engineer | NLP, Computer Vision & Applied AI
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SUMMARY

Machine Learning Engineer (MCA, Galgotias University, 2026) with hands-on experience designing, fine-tuning, and deploying applied ML systems — combining transformer-based NLP (DistilBERT) and CNN-based computer vision (ResNet-18) into a production multimodal pipeline, and building demand-forecasting models (RandomForest, XGBoost, Prophet) evaluated with RMSE/MAE. Built and deployed DeepVeritas, a multimodal misinformation detection platform achieving ~3-5 second real-time inference on Hugging Face Spaces. Comfortable across the ML lifecycle: data preprocessing, feature engineering, model fine-tuning, evaluation, and production deployment.

TECHNICAL SKILLS

Languages: Python, JavaScript, Java

Machine Learning & Deep Learning: PyTorch, Torchvision, Hugging Face Transformers, RandomForest, XGBoost, Prophet, Model Fine-Tuning, LLMops

NLP & Computer Vision: DistilBERT (NLP), CNN / ResNet-18 (Computer Vision), Late-Fusion Multimodal Architectures

Data & Evaluation: Pandas, NumPy, Feature Engineering, Exploratory Data Analysis, Model Evaluation (RMSE, MAE)

Deployment & MLOps Tools: Streamlit, Hugging Face Spaces, Git/GitHub, VS Code, Postman

Databases: MongoDB, MySQL, SQLite

PROJECTS

DeepVeritas — Multimodal Misinformation Detection Platform | Python, PyTorch, DistilBERT, ResNet-18, Streamlit
huggingface.co/spaces/jwala01/deepveritas

- Engineered a multimodal fake-news detection system fusing transformer-based NLP (DistilBERT) and CNN-based computer vision (ResNet-18) predictions
- Designed and trained a custom late-fusion algorithm to combine text and image model outputs, improving overall detection accuracy
- Built and deployed a complete end-to-end ML pipeline — from data preprocessing and feature engineering to real-time inference — achieving a ~3-5 second response time on Hugging Face Spaces

AI-Powered Retail Demand Forecasting & Multi-Vendor Marketplace | Python, RandomForest, XGBoost, Prophet, Node.js
retail-demand-forecasting-ym09.onrender.com

- Built and compared multiple time-series forecasting models (RandomForest, XGBoost, Prophet) on historical sales data, evaluating accuracy with RMSE and MAE
- Engineered a Python ML microservice invoked from a Node.js backend, exposed through an in-app Model Evaluation dashboard for model comparison and selection
- Performed exploratory data analysis — correlation, seasonality, and trend analysis — to inform feature engineering and model design

NeuralChat — Multi-Model AI Chat Application | Node.js, Groq, Hugging Face, OpenRouter APIs
neuralchat-qp27.onrender.com

- Integrated and orchestrated 10+ LLMs across multiple inference providers (Groq, Mistral, OpenRouter, Hugging Face) behind a unified chat interface
- Built a Node.js proxy layer handling provider/model selection, multi-turn conversation state, and streaming markdown responses

EXPERIENCE

Machine Learning Engineer — Academic & Self-Driven Projects 2025 – 2026

- Designed and fine-tuned transformer (DistilBERT) and CNN (ResNet-18) models, integrating them into a late-fusion multimodal pipeline for real-time inference
- Built and evaluated time-series forecasting models (RandomForest, XGBoost, Prophet), using RMSE/MAE to guide model selection
- Performed data preprocessing, feature engineering, and exploratory data analysis to prepare datasets for training and evaluation
- Deployed ML systems to production (Hugging Face Spaces, Render), integrating Python model-serving code with Node.js/web application layers

CERTIFICATIONS

- Artificial Intelligence — Udemy
- Data Analysis and Visualization with Python — Microsoft
- Foundations of Cybersecurity — Google

EDUCATION

Master of Computer Applications (MCA) — Galgotias University, 2026

Bachelor of Computer Applications (BCA) — University of Lucknow, 2022

12th (Higher Secondary) — Shaheed Inter College, 2019 | 10th (High School) — Shaheed Inter College