AWANTIKA SRIVASTAVA

Software Engineer – AI Systems | ML Engineer | GenAI Developer

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PROFILE SUMMARY

Software Engineer with **2+ years of experience** building **AI-powered and ML-driven backend systems**. Strong expertise in **Python, cloud-native architectures, REST APIs, CI/CD, and containerized deployments**. Hands-on experience in **production ML systems, Generative AI (RAG), deep learning models, and scalable microservices**. Proven ability to design, deploy, and maintain **reliable, high-performance AI systems** aligned with enterprise software engineering standards.

CORE TECHNICAL SKILLS

- **Programming Languages:** Python, C, C++, SQL
- **Machine Learning:** Supervised & Unsupervised Learning, Regression, Classification, Clustering, Random Forest, Decision Trees, SVM, KNN, K-Means, XGBoost.
- **Deep Learning & AI:** Neural Networks, CNN, RNN, LSTM, Transformers (BERT), Transfer Learning, Model Fine-tuning, LLMs, RAG.
- **Computer Vision**: Image Classification & Preprocessing, Object detection (YOLO, SSD, MobileNet, ResNet), Video Analytics, OpenCV
- **NLP**: Text preprocessing, Tokenization, Transformers, Sentiment Analysis, Transformer-based models.
- **Backend & APIs:** REST APIs, FastAPI, Flask, Microservices Architecture
- **Frameworks & Libraries:** TensorFlow, Keras, PyTorch, ONNX, Scikit-learn, Hugging Face.
- **Cloud & DevOps:** AWS, Docker, Kubernetes, CI/CD, Git.
- **Data & Systems:** Data Pipelines, Feature Engineering, Model Inference, Monitoring, Observability.
- **Software Engineering:** Data Structures, Algorithms, System Design, SDLC, Agile Development.

EXPERIENCE

AI Engineer / AI/ML Engineer | PPS International Pvt. Ltd. **January 2024-Present**

- Developed and optimized **CNN-based deep learning** models for real-time **computer vision** safety systems.
- Implemented the **complete AI/ML lifecycle**, including data collection, preprocessing, model training, evaluation, and deployment.
- Deployed optimized models using **TensorFlow Lite** on **edge devices**, achieving low-latency inference under constrained CPU and memory environments.
- Designed and maintained **end-to-end inference pipelines** for continuous video stream processing.
- Built a **Flask-based web application** to visualize AI detections and automatically recorded video events for monitoring and analysis.
- Optimized inference workflows to ensure reliable performance on **low-resource hardware platforms**.
- Worked independently and collaboratively to deliver production-ready AI solutions with minimal supervision.

PROJECTS

Railway Driver Assistance System (RDAS) | Enterprise ML Project

- Designed and deployed a **real-time ML systems** for unsafe behavior detection using **CNN-based object detection** models.
- Implemented **end-to-end ML pipelines** from data ingestion to production inference.
- **Deployed** optimized models using **TensorFlow Lite** for continuous, **low-latency inference.**
- Developed a **Flask-based** web interface to display detections and recorded video clips in **real time**.
- **Deployed** the complete solution on **edge devices**, enabling reliable on-device inference and **real-time event recordings**.

Amazon Stock Price prediction | Applied ML Project

- **Built batch-oriented ML workflows** for time-series forecasting using **LSTM** models.
- Implemented data **preprocessing**, feature engineering, and model **evaluation pipelines** on **large** historical datasets.
- Designed **sliding-window** based **sequence generation** and trained LSTM model 5-year stock price data.
- Evaluated model performance using appropriate regression **metrics** and **trend-based analysis** for short-term forecasting.

YouTube Comments Sentiment Analyzer | link - https://youtube-ai-analyzer-ndzqo6r2mepjrtsdjmwaxl.streamlit.app/

- Deployed transformer-based **NLP models** as **production-ready** services with **REST APIs**.
- **Fine-tuned** and served a **DistilBERT**-based **sentiment** classification model for large-scale text inference.
- **Built** and deployed an interactive **streamlit web application** to perform real-time **sentiment analysis** on YouTube comments.
- **Processed** high-volume text **data** with sub-second inference **latency** for real-time sentiment analysis.

CERTIFICATION

- IBM Data Science & AI Certification
- AWS Generative AI with Large Language Models
- OpenCV Computer Vision Certification

EDUCATION

IMS Engineering College, Ghaziabad **September - 2020**
Bachelor of Technology (Electrical and electronics engineering)