

# AWANTIKA SRIVASTAVA

AI/ML Engineer | Computer Vision | NLP

📍 Noida, Uttar Pradesh (Open to on-site)

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## PROFILE SUMMARY

AI/ML Engineer with 2+ years of hands-on experience in building, deploying, and scaling **AI-driven automation solutions** across **computer vision, NLP, and analytics** use cases. Strong expertise in **image-based quality checks, real-time ML pipelines, forecasting models, and data-driven decision systems**. Proven ability to translate **business problems into production-ready AI systems**, improve accuracy and scalability, and deliver measurable operational impact.

## CORE TECHNICAL SKILLS

- **Programming Languages & Tools:** Python, Numpy, Pandas, Matplotlib, Scikitlearn, C++, SQL.
- **Statistics & Mathematics:** EDA, Statistical Modeling, Hypothesis Testing, Probability, Linear Optimization, Trend Analysis, A/B Testing
- **Machine Learning:** Supervised & Unsupervised Learning, Regression, Classification, Clustering, Random Forest, Decision Trees, SVM, KNN, K-Means, XGBoost, Hyperparameter Tuning.
- **Deep Learning:** Neural Networks, CNN, RNN, LSTM, Transformers (BERT), Transfer Learning, Model Fine-tuning, LLMs, RAG
- **Computer Vision & Automation:** Image-based Quality Inspection, Object Detection, Image Classification, Video Analytics, CNNs, YOLO, SSD, MobileNet, TensorFlow Lite, PyTorch, TensorFlow, Keras
- **Model Optimization & Production:** Low-latency Inference, Quantization, Model Accuracy Improvement, Scalability, Production-ready ML Systems
- **NLP:** Text preprocessing, Tokenization, Chunkings, Transformers, Sentiment Analysis, Transformer-based models, NLTK, SciPy, Spacy, Trend Mining
- **Forecasting & Demand Intelligence:** Time-series Forecasting, LSTM, SKU-level & Trend-based Forecasting, Data-driven Decision Support
- **Data Handling & Databases:** SQL Queries, MySQL, SQL Server, MongoDB, Advance Excel
- **Cloud & Deployment:** AWS EC2, AWS SageMaker, REST APIs, Model Deployment & Monitoring
- **Tools & SDLC:** Git, GitHub, JIRA, Confluence, Structured Software Development.

## EXPERIENCE

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

- Developed an **LSTM-based time series forecasting model** using historical data of **50K+ records** to predict future trends.
- Applied **data normalization, sequence modeling, and feature selection**, improving forecast accuracy by **18-22%**.
- Optimized model performance through **hyperparameter tuning**, reducing validation loss by **20%**.
- Evaluated models using **RMSE and MAE**, ensuring reliable performance on unseen data.
- Built reusable **Python ML pipelines** for training, evaluation, and inference.

YouTube Comments Sentiment Analyzer | link -<https://youtube-ai-analyzer-ndzqo6r2mepjtsdjmwxl.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

Bachelor of Technology (Electrical and electronics engineering)

September - 2020