

# AWANTIKA SRIVASTAVA

Data Scientist | Generative AI | NLP | Machine Learning

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## PROFILE SUMMARY

Data Scientist with **2+ years of hands-on experience** in building **machine learning, NLP, and Generative AI solutions** that translate complex business requirements into **actionable, data-driven insights**. Strong expertise in **Python, NLP/NLU, Generative AI, deep learning frameworks, and cloud-based AI systems**. Proven ability to design, develop, and deploy **production-ready AI models** while collaborating closely with business stakeholders in fast-paced environments.

## CORE TECHNICAL SKILLS

- **Programming Languages & Tools:** Python, C++, Numpy, Pandas, Scikit-learn, SQL..
- **Statistics & Mathematics:** Statistical Modeling, Hypothesis Testing, Probability, Linear Optimization, Trend Analysis.
- **Machine Learning:** Supervised & Unsupervised Learning, Regression, Classification, Clustering, Random Forest, Decision Trees, SVM, KNN, K-Means, XGBoost, Hyperparameter Tuning.
- **Deep Learning & GenAI:** Neural Networks, CNN, RNN, LSTM, Transformers (BERT), Transfer Learning, Generative AI, RAG, LLMs, Prompt Engineering.
- **Frameworks:** TensorFlow, Keras, Pytorch, Flask.
- **Computer Vision:** Image Classification & Preprocessing, Object detection (YOLO, SSD, MobileNet, ResNet), Video Analytics, OpenCV.
- **NLP:** Text preprocessing, Tokenization, Sentiment Analysis, Transformer-based models, NLU.
- **Data Analysis & Visualization:** Exploratory Data Analysis (EDA), Statistical Analysis, Matplotlib, Seaborn.
- **APIs & Deployment:** REST APIs, Model Inference Services, Streamlit.
- **Cloud & Tools:** AWS (EC2, S3), MLflow (experiment tracking – exposure), Docker (exposure).

## EXPERIENCE

### Data Scientist / AI/ML Engineer | PPS International Pvt. Ltd.

January 2024-Present

- Designed and developed **machine learning and AI solutions** to solve real-world business problems.
- Performed **data collection, cleaning, feature engineering, and exploratory data analysis (EDA)** on structured and unstructured datasets.
- Built and optimized **predictive, classification, and NLP models** using Python and deep learning frameworks.
- Collaborated with business and product stakeholders to translate requirements into **analytical problem statements**.
- Deployed trained models as **REST API-based inference services** for real-time usage.
- Monitored model performance and continuously improved models based on analytical results and feedback.
- Communicated analytical insights and model outcomes in a **business-meaningful manner** to stakeholders.

## PROJECTS

### Railway Driver Assistance System (RDAS) | Enterprise ML Project

- Built and deployed a **production-grade machine learning system** to detect unsafe driver behavior, translating real-world safety requirements into AI-driven solutions.
- Designed and owned **end-to-end ML pipelines** covering data ingestion, preprocessing, feature engineering, model training, evaluation, and inference for real-world deployment.
- Trained **CNN-based computer vision models (SSD MobileNet)** using **TensorFlow**, and optimized inference using **TensorFlow Lite** for low-latency environments.
- Achieved **real-time inference performance (20–25 FPS, <150 ms latency)**, enabling near real-time decision-making in operational settings.
- Implemented **model monitoring, performance regression checks, and alerting mechanisms** to ensure reliable post-deployment model behavior.
- Integrated model predictions into **downstream systems via REST APIs**, delivering **actionable insights** to support operational and safety-related decision

### Chatbot using LLM & RAG | Applied ML Project

- Built a **production-grade Generative AI (GenAI) application** using **Large Language Models (LLMs)** and **Retrieval-Augmented Generation (RAG)** for context-aware question answering.
- Designed and implemented **document ingestion, embedding generation, vector retrieval, and LLM inference orchestration pipelines**.
- Applied **prompt engineering, response evaluation, and reliability tuning** to improve output accuracy, consistency, and relevance.
- Deployed the solution as an **observable LLM inference service**, aligning with modern **GenAI and LLM production workflows**.

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

- Developed an **end-to-end NLP modeling system** using **BERT / DistilBERT** for large-scale sentiment classification.
- Performed **EDA, text preprocessing, feature engineering, model training, and statistical evaluation** on real-world user-generated data.
- Conducted **baseline comparisons and experiment tracking** to optimize model performance.
- Deployed the model as a **REST API-based inference service** to deliver actionable sentiment insights to business stakeholders.

## 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