

SUBHANSHU SETHI

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AI/ML Engineer specializing in Computer Vision with experience spanning research and end-to-end deployment. Published at **IJCNN 2025** (multimodal vision-language; **GExSent**). Built and optimized real-time object detection pipelines using **YOLOv8** and TensorRT, achieving **15 FPS on Jetson Nano**. Proficient in shipping scalable solutions with Docker and MLOps.

Publications

- S. Sethi, et al. (2025). **GExSent: Gated Experts for Robust Sentiment Analysis Across Modalities**. Accepted at the **International Joint Conference on Neural Networks (IJCNN)**, Rome, Italy.
- S. Sethi, et al. (2024). **ContXCLIP: Contextual Attention for Vision-Language Understanding**. Under review at *Signal Processing: Image Communication (Elsevier)*.

Education

B.Tech in Electrical Engineering, Delhi Technological University (DTU) 2021 – 2025
Relevant Coursework: Computer Vision, Machine Learning

Work Experience

Computer Vision Intern, Novus Hi-Tech Jun 2024 – Present

- Implemented object detection and multi-object tracking using **YOLOv8**, ByteTrack, and Kalman filters, improving accuracy by **20%** on NVIDIA edge devices.
- Optimized pose estimation with RANSAC and TensorRT, achieving **15 FPS** real-time inference on **Jetson Nano**.
- Built Dockerized, scalable solutions for deployment on autonomous pallet picker robots.

Projects

Image Captioning (Paper Under Review) Dec 2023 – Nov 2024
GitHub – ContXCLIP

- Achieved a BLEU-4 score of 54 using a CLIP-GPT2 architecture with contrastive learning and attention enhancements.
- Evolved from CNN-LSTM to Transformer-based encoder-decoders for improved fluency and semantic alignment.

Customer Churn Prediction Mar 2025 – Apr 2025
GitHub – Churn Prediction

- Built an end-to-end churn predictor with XGBoost, Random Forest, and Logistic Regression (ROC-AUC: 0.89).
- Integrated SMOTE, feature engineering, and hyperparameter tuning with GridSearchCV.
- Deployed a Streamlit chatbot with Docker; tracked experiments using MLflow and versioned data/models with DVC.

Multimodal Classification (Paper Accepted) Feb 2025 – Apr 2025
GitHub – GExSent

- Developed **CLIP + ModernBERT** Mixture-of-Experts model for multimodal classification.
- Achieved SOTA performance with a reduced parameter footprint.

Achievements

- 3rd Place** — International Micro Aerial Vehicle Competition, Aachen (Nov 2023)
Developed a lane-following drone with autonomous search-and-rescue features.
- Top 10 / 19,000+ teams** — Flipkart Grid Robotics Challenge (Jan 2025)
Built a VLM-based FMCG feature extractor with zero-shot segmentation and object counting.

Skills

Languages: Python, C++, SQL

Frameworks: PyTorch, TensorFlow, Transformers, OpenCV, TensorRT

MLOps: Docker, Git, MLflow, DVC, Weights & Biases

Hardware: Jetson Nano, Intel NUC, Raspberry Pi

Domains: LLM *fine-tuning*, Quantization, NLP, Computer Vision

Certifications

- Deep Learning Specialization (Coursera)** — Neural Networks, CNNs, Sequence Models, Improving Deep Neural Networks
- University Courses:** Deep Learning and Artificial Neural Networks, Fundamentals of Machine Learning