

AMEYA GAWANDE

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PROFILE

Proficient in data analysis with expertise in neural networks and machine learning. Skilled in data pipelining, acquisition, cleaning, and analysis. Experienced in developing algorithms for image processing, denoising, and object detection, with a strong focus on solving complex problems through iterative processes

PREVIOUS INTERSHIPS

AI/ML INTERN AT TECH MAHINDRA MAKERS LAB

July 2024 to December 2024

- Contributed to the development of the Indus Large Language Model (LLM), an open-source multilingual AI initiative.
- Managed end-to-end data acquisition, preprocessing, and cleaning pipelines for model training.
- Developed an AI-powered Language Coach with real-time feedback capabilities, improving user grammar accuracy by over 40% in testing environments.
- Gained practical experience in utilizing Hugging Face Transformers, GPT architectures, and open-source frameworks for fine-tuning and deploying language models in production environments.

SKILLS

- Programming Languages:** Python, C, Java, R
- Technical Skills:** Machine Learning, Neural Networks, Deep Learning, Data Science, Microsoft Power BI, Hugging Face Transformers, GPT-based Models, Model Evaluation, Flask API, Data Visualization
- Frameworks/Libraries:** PyTorch, TensorFlow, OpenCV.
- Languages:** English, Hindi, German, Marathi.
- Certifications:** Google Data Analytics (MD4240), Mastering Microsoft Power BI, Essentials in Generative AI

PROJECTS

1. Scene Perception for Automotive Vehicles

- Built a real-time driver assistance system using multi-neural network fusion for dynamic scene analysis.
- Integrated high-accuracy neural network models to detect lanes, vehicles, and traffic signs concurrently.
- Demonstrated smooth, low-latency performance in test scenarios using video input streams.

2. Image Denoising Using Multi-level Wavelet CNN

- Designed a deep learning model to denoise sRGB images while preserving edges and color fidelity.
- Achieved a PSNR of 35.42 dB and SSIM of 0.865, outperforming DnCNN (32.1 dB) and CBDNet (33.5 dB).
- Reduced denoising runtime by 18% by leveraging efficient wavelet-based operations.

3. Drone Detection Using HOG-SIFT Fusion

- Developed a hybrid detection system combining HOG and SIFT features with ML classifiers (RF).
- Achieved a detection accuracy of 94.6% on a custom dataset of FPV and autonomous drone images.
- Reduced false-positive rate by 22% compared to standalone HOG-based systems.

EDUCATION

- B.Tech In Electronics & Telecommunications**
Vishwakarma Institute of Technology

July 2022 – May 2025 | CGPA: 8.06

- Diploma In Mechanical Engineering**
Cusrow Wadia Institute of Technology

June 2019 – May 2022 | Percentage: 89.24%