PRABHAT KUMAR JHARIA

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EXPERIENCE

Image Analysis AI Expert **June 25, 2025 – Present**

StrideAide Private Limited, Bengaluru, India

Working on AI-driven diabetic foot risk triaging using multimodal inputs: foot images, foot pressure maps, neuropathy scores (NEUROTOUCH), and arterial reports (ABI, TBI). Responsible for data preprocessing, CNN-based image segmentation/classification, and integration of models into clinical triaging workflows (D-PoCs).

EDUCATION

M.Tech – Signal Processing and Machine Learning **CGPA: 7.8/10**

Indian Institute of Science, Bengaluru, India

B.Tech – Electronics and Communication **CGPA: 6.93/10**

Jabalpur Engineering College, Jabalpur, India

TRAINING / COURSES

- Digital Image Processing
- Advanced Image Processing
- Data Structures and Algorithms
- Computer Vision
- Pattern Recognition and Neural Network
- Machine Learning and Deep Learning
- Linear and Non-Linear Optimization

SKILLS

Domains: • Video/Image Processing • Computer Vision • Deep Learning • Machine Learning • Optimization Algorithms • LLMs

Languages/Tools: • Python • Matlab • OpenCV • LaTeX • SQL • TensorFlow • PyTorch

PROJECTS

MRI Image Reconstruction using Vision Transformers

- Implemented Vision Transformers for MRI reconstruction, achieving superior performance to U-net with 2x higher throughput and reduced memory usage
- Leveraged pre-training on natural image datasets like ImageNet, enhancing reconstruction quality by 2% in low-data settings and improving robustness to anatomy shifts

Breast Cancer Classification Using Deep Learning

- Developed ultrasound-based classification system using ConvNext-Base and DeepLabV3+
- Achieved 100% test accuracy for classification and 0.8861 Dice score for segmentation
- Implemented two-step pipeline combining image segmentation and classification

SegNet Model and Pretrained CNN for Lane Detection

- Performed semantic segmentation on City Lane Dataset using FCN and SegNet models
- Processed diverse driving condition images including cloudy mornings, afternoons, intersections, and highways
- Analyzed model performance across different urban road scenarios and lighting conditions

Automatic Number Plate Recognition (ANPR) and Vehicle Monitoring System

- Built a real-time ANPR pipeline achieving 92% license plate detection and 88% OCR accuracy on Indian vehicle datasets.
- Integrated vehicle classification for 6 classes with 90% precision using pre-trained CNN models.
- Optimized for deployment with annotated video output, duplicate entry suppression (less than 60 Sec), and efficient logging.

Emotion Recognition and Gender Classification

- Developed CNN-based model using Mini Xception with Depthwise Separable Convolutions
- Achieved 77.8% accuracy on FER2013 with background images and 85.4% after background removal
- Used IMDB dataset for gender classification and FER2013 for emotion recognition