

SHUBHAM GAJJAR

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PROFESSIONAL SUMMARY

Artificial Intelligence Engineer with expertise in deep learning and computer vision, delivering production systems serving 10,000+ daily users. Published researcher achieving 99.59% accuracy in brain tumor segmentation and 96.3% in skin cancer classification. Proven ability to reduce processing time by 25% through distributed computing while collaborating in Agile teams. Demonstrated leadership and adaptability in research and development environments.

EDUCATION

Northeastern University, Portland, Maine

September 2025 – May 2027

Master of Science in Artificial Intelligence

LDRP Institute of Technology and Research, Gandhinagar, India

September 2022 – May 2025

Bachelor of Engineering in Computer Engineering, Grade Point Average: 8.41/10.0

Relevant Coursework: Machine Learning, Deep Learning, Computer Vision, Artificial Intelligence, Data Structures and Algorithms, Image Processing

TECHNICAL SKILLS & CERTIFICATION

Languages: Python, React, JavaScript

Deep Learning: TensorFlow, Keras, PyTorch, CUDA

Computer Vision: OpenCV, Albumentations

Data Science: NumPy, Pandas, Matplotlib

Web: Flask, Node.js, React.js

Cloud: Git, Docker, Amazon Web Services

Concepts: Deep Learning, Transformers, Reinforcement Learning

Certificates: Python for Data Science from Indian Institute of Technology Madras, Python Data Structures from University of Michigan

PROFESSIONAL EXPERIENCE

BigCircle (UPSAAS Technologies LLP), Gandhinagar, India

Artificial Intelligence Engineer

January 2025 – August 2025

- Architected multi-agent Application Programming Interface system using distributed computing, reducing report generation 25% for 10,000+ queries
- Engineered pagination and authentication systems for dashboards, accelerating page load times by 30% while securing 500+ concurrent sessions
- Delivered iOS applications using React Native, increasing mobile engagement by 45% within the first quarter
- Collaborated with the 5-member team in Agile sprints, performing code reviews to improve quality metrics by 30%

KEY PROJECTS

Brain Tumor Segmentation using VGG16-MCA UNet

Under Review at Elsevier

- Designed Multi-Channel Attention architecture achieving 99.59% accuracy on 3,000+ FLAIR Magnetic Resonance Imaging scans
- Implemented ensemble strategy combining 3 decoder variants, improving boundary precision by 3.7%
- Processed medical imaging dataset using preprocessing pipeline, reducing noise artifacts by 65%
- Applied analytical thinking to implement Focal Tversky Loss and Adam optimization for improved class balance
- Enhanced tumor boundary detection using attention-guided skip connections and normalization techniques

Skin Cancer Classification using Hybrid Model

Accepted at IEEE

- Developed Hybrid ResNet-Vision Transformer classifier attaining 96.3% accuracy on HAM10000 dataset
- Integrated segmentation module for hair detection, enhancing classification robustness by 5.2%
- Presented research at IEEE World Conference to 200+ attendees
- Incorporated Squeeze-and-Excitation and Inverse Soft Mask Attention through analytical thinking for improved lesion region focus
- Utilized Nadam optimizer with cosine decay scheduling demonstrating problem-solving for efficient convergence

Reinforcement Learning Agent for TrackMania

Academic Project

- Constructed autonomous racing agent using Implicit Quantile Networks, achieving 81% track completion
- Optimized training framework reducing Graphics memory usage by 30%
- Integrated visual and numerical game-state inputs using Reinforcement Learning framework for real-time decision-making
- Achieved near-human lap times by optimizing the reinforcement agent

PUBLICATIONS

Publications:

- IEEE publication on Hybrid ResNet-Vision Transformer for skin cancer classification (Presented at IEEE World Conference, 2025)
- Research on VGG16-MCA UNet for brain tumor segmentation (Under Review at Elsevier)