Nitin Yadav

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RESEARCH INTERESTS

- Medical Image Analysis
- Machine Learning & Deep Learning
- Image Processing & Computer Vision

EDUCATION

Ph.D. Scholar, Electronics and Electrical Engineering, IIT Guwahati Jul 2022 – Present
Supervisor: Prof. M.K. Bhuyan

B.Tech, Electrical Engineering, GEC Kannauj, Uttar Pradesh 2016 – 2020
CGPA: 7.72 / 10

PROJECTS

- **Air Writing System** *Jan 2024 – May 2024*
  Guide: Prof. M.K. Bhuyan
  Developed a finger motion recognition system that converts hand gestures in the air into text using deep learning and computer vision techniques.
- **Skin Cancer Segmentation and Classification** *Jan 2025 – Jul 2025*
  Guide: Prof. P.K. Bora
  Designed a deep learning model for skin cancer segmentation and classification achieving an IoU of 84% and accuracy of 91%. Developed a web interface for real-time detection and visualization.
- **Detection of Various Brain Disorders** *Jan 2023 – Jul 2023*
  Guide: Dr. D.R. Neog
  Proposed a generalized deep learning framework for multi-disorder brain MRI classification achieving 95.2% training and 90.21% validation accuracy. **Skills:** Python, OpenCV, TensorFlow.
- **Face Mask Detection** *Jul 2022 – Nov 2022*
  Guide: Prof. M.K. Bhuyan
  Built a real-time CNN-based model to detect whether individuals are wearing masks.

PROFESSIONAL EXPERIENCE

Physics Teacher, Mega Mind Coaching, Kannauj, Uttar Pradesh May 2019 – Jul 2021
Taught Physics to high school and intermediate students, designed conceptual problem sets, conducted lab demonstrations, and prepared students for JEE and NEET examinations.

Summer Intern, Dakshinanchal Vidyut Vitran Nigam Limited (DVVNL), Kannauj Jun 2019
Learned the operational principles of power generation, transmission, and distribution systems. Observed substation functioning, power flow management, and safety procedures.

TECHNICAL AND PROFESSIONAL SKILLS

Programming: Python (ML, DL, IP, CV), C, Java, MATLAB, PHP, SQL, HTML/CSS, Arduino, MIPS Assembly
Frameworks: PyTorch, TensorFlow, Keras
Tools: Git, LaTeX **Database:** MySQL

TEACHING EXPERIENCE

- **C-DAC CINE:** Guest Faculty for Deep Learning PGD-AI course (2025).
- **EEE Department, IIT Guwahati:** Teaching Assistant for Machine Learning and Machine Learning Lab (2023–2025), Computer Vision (2024–2025), and Basic Electronics Lab (2023).
- **NPTEL:** Teaching Assistant for *Machine Learning and Deep Learning - Fundamentals and Applications* (2024–2025), and *Computer Vision* (2025).
- **Coursera:** Teaching Assistant for *Data Science: An Introduction* (Feb 2024 – May 2024).

REFERENCES

Available upon request.