MOHIT KUMAR

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EDUCATION

Vellore Institute of Technology (VIT Chennai) — Chennai, India
Bachelor of Technology in Electronics and Computer Engineering | ***CGPA: 9.09/10.0*** — *Aug 2022 – July 2026*

Radiant International School — Patna, India
Higher Secondary Education | ***Class XII: 95.6%*** | ***Class X: 94.2%*** — *2019 – 2021*

PROFESSIONAL EXPERIENCE

Shantou University & CHAIR, VIT [Certificate] — Shantou, China (Hybrid)
Research Intern — *May 2025 – Aug 2025*

- Designed Gated Multi-Domain CUT model for X-ray normalization across multiple intensity levels using unified generator with attention-based architecture, achieving SSIM of 0.9858 and outperforming CycleGAN, StarGAN, and CUT.

Annam.AI [Certificate] — IIT Ropar, Punjab (Remote)
Project Intern — *May 2025 – Jul 2025*

- Developed Sanchalak, a multilingual voice assistant enabling farmers to access 50+ government schemes via regional audio input with FastAPI backend, Prolog-based rule engine, Whisper, Azure Translator/TTS, and Gemma LLM achieving sub-5s latency.

Samsung PRISM [Certificate] — Chennai, India (On-Site)
Research Intern — *Jul 2024 – Feb 2025*

- Fine-tuned CLAP and CLIP models on 20,000+ medical audio samples from PhysioNet, BHIC, AudioSet, VGG-Sound datasets and built annotation pipeline with t-SNE visualization enabling zero-shot analysis across 10+ body sound classes.

Center for Cyber Physical Systems, VIT Chennai [Certificate] — Chennai, India (Hybrid)
Research Intern — *Jun 2024 – Jul 2024*

- Developed HAR-GCNN model achieving 99.99% accuracy on PAMAP2 dataset with graph-based spatiotemporal architecture robust to 66% missing labels, outperforming CNN (99.75%) and LSTM (98.10%) across 3-25 activity classes [cite: 3]

PROJECTS

Nexus - Multi-Agent AI Research Assistant | *Flask, LangGraph, LangChain, WeasyPrint*

- Built multi-agent system automating research article generation with 3 specialized agents, reducing manual effort by 75% and implementing data collection from Google, ArXiv, Wikipedia with Google Fact Check API achieving 100% structured output in .md, .json, .pdf formats in under 20 seconds

Parking Slot Occupancy Detection | *PyTorch, Swin Transformer, OpenCV, YOLO*

- Constructed hybrid deep learning model combining Swin Transformer and GLCM for parking slot classification achieving 98.58% test accuracy and macro F1-score of 0.9856 on custom dataset of 6,110 slots with robustness to shadows and occlusions

TECHNICAL SKILLS

Programming Languages: Python, Java, SQL, Prolog
ML/AI Frameworks: PyTorch, TensorFlow, Scikit-Learn, LangChain, LangGraph, HuggingFace, OpenCV
Tools & Technologies: FastAPI, Streamlit, Git/GitHub, Azure AI, MongoDB, Jupyter, Jira
Relevant Coursework: Operating Systems, DBMS, OOPs, Data Structures & Algorithms, Compiler Design, Deep Learning, Computer Vision, NLP, Calculus, Probability & Statistics

CERTIFICATIONS & ACHIEVEMENTS

Certifications: Microsoft Azure AI Engineer Associate | Azure Data Scientist Associate | Azure AI Fundamentals | OCI Generative AI Professional | IBM Python for Data Science | Dataiku ML Practitioner
Publications: AgriCure: An AWS S3-Integrated Deep Learning Platform for Automated Crop Disease Detection | *IEEE Xplore* | Link to Paper — Dec 2025
Achievements: IEEE IC Hackathon 2.0 Finalist (AIR 7/600 teams) | 2nd Position State-level Science Exhibition | Coordinated Bihar's first Atal Tinkering Lab (Niti Aayog funded) | Languages spoken: English, Hindi, Bengali