MOHIT KUMAR

mohit.kr1103@gmail.com | 9973395247 | Bengaluru, India | LinkedIn | Github

EDUCATION

Vellore Institute of Technology (VIT Chennai) — Chennai, India
Bachelor of Technology in Electronics and Computer Engineering | ***CGPA: 9.08/10.0*** — *Aug 2022 – May 2026*

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

PROFESSIONAL EXPERIENCE

Shantou University — Shantou, China (Remote)
Research Intern — *May 2025 – Sep 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 — 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 R&D Institute India (PRISM) — Chennai, India (On-Site)
Research Intern — *Jul 2024 – Apr 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 — Chennai, India (Hybrid)
Research Intern — *Jun 2024 – Aug 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

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, C/C++, SQL, Prolog
ML/AI Frameworks: PyTorch, TensorFlow, Scikit-Learn, LangChain, LangGraph, HuggingFace, OpenCV
Tools & Technologies: FastAPI, Streamlit, Git/GitHub, AWS, Azure AI, MongoDB, Jupyter, Docker, Jira
Specializations: Large Language Models, RAG Pipelines, Computer Vision, NLP, Multi-Agent Systems

CERTIFICATIONS & ACHIEVEMENTS

Certifications: Microsoft Azure AI Engineer Associate | Azure Data Scientist Associate | Azure AI Fundamentals | Oracle Cloud Infrastructure 2024 Generative AI Professional
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