G Kalyan Ram

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SUMMARY

Computer Science undergraduate from NIT Andhra Pradesh with a strong foundation in Data Structures, Machine Learning, and Web Development. Experienced in building real-world solutions integrating deep learning models with scalable web architectures. Passionate about solving impactful problems through AI, backed by hands-on research and development in Graph-RAG, NLP, and computer vision projects.

EDUCATION

National Institute of Technology, Andhra Pradesh — Andhra Pradesh, India
B.Tech in Computer Science & Engineering; CGPA: 8.25/10.0 — *Nov. 2022 – Present*

EXPERIENCE

Vision Exploration and Data Analytics (VEDAs) Lab, MNNIT Allahabad
Research Intern — *May 2025 – July 2025*
- Developed a Personalized Diagnostic Question Answering System (Graph-RAG) by integrating ICD-9 knowledge graphs with a T5-based language model for clinical diagnostic reasoning.
- Designed a hybrid retrieval pipeline combining symbolic graph traversal and dense vector search.
- Implemented RAG to produce context-aware responses; achieved improvements in Recall & BLEU score. **Code:** GitHub

PROJECTS

American Sign Language Detection | *Python, YOLOv5, Streamlit* — June 2025 – July 2025
- Built a real-time ASL letter detection system using a custom-trained YOLOv5 model.
- Deployed an interactive web interface using Streamlit to allow image uploads and instant predictions with bounding boxes.
- **Demo:** Live Streamlit App   **Code:** GitHub

Heartbeat Sound Classification | *TensorFlow, Keras, Librosa* — Jan. 2025 – May 2025
- Worked on an LSTM-CNN model for heartbeat sound classification. Also implemented a Temporal Convolutional Neural Network (TCNN) model for the task. Trained on cardiac sound data, the models aid in early heart disease detection.
- Deployed TCNN model demo on Hugging Face Spaces.

Student Results Management Portal | *Python, Django, PostgreSQL* — Jan 2024 – May 2024
- Designed a secure student results portal with results, dashboard, analytics and profile pages.
- Implemented efficient PostgreSQL schemas for performance and scalability.

COURSES & CERTIFICATIONS

Fundamentals of Deep Learning (NVIDIA)
Data Analytics (Accenture)
Cloud Computing (NPTEL, IBM Cognitive)

Google Project Management (Coursera)
Machine Learning (Udemy)
AWS Cloud Practitioner

POSITIONS OF RESPONSIBILITY

Joint Secretary — CSEA
Computer Science and Engineering Association, NIT Andhra Pradesh — *Sept. 2024–Present*

Executive Member — Graphic Cafe
Media Cell of NIT Andhra Pradesh — *Sept. 2024–Present*

SKILLS

Languages: Python, C, Java, JavaScript, HTML, CSS

Frameworks/Libraries: Django, React, Express, TensorFlow, PyTorch, Streamlit, MLflow

Tools & Platforms: Git, GitHub, Jupyter, PostgreSQL, MongoDB, FAISS, AWS, Node, Hugging Face, Linux

RELEVANT COURSEWORK

Data Structures, Algorithms, OOPS, DBMS, Web Development

Artificial Intelligence, Machine Learning, Deep Learning, Natural Language Processing