

Sanagana Amrutha

Roll No.: S201105

Bachelor of Technology , CSE

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🐙 GitHub Profile

🌐 LinkedIn Profile

EDUCATION

B.Tech in Computer Science and Engineering , RGUKT Srikakulam (2022-2026) CGPA:8.98

PUC in Maths Physics and Chemistry , RGUKT Srikakulam (2020-2022) CGPA:9.8

SSC , Z.P.High School ,PrakasaRao Palem (2019-2020) CGPA:10

PROJECTS

Person Detection using DETR | [Link](#)

Person Detection using DETR (DEtection TRansformer)

- Implemented a person detection system leveraging DETR (DEtection TRansformer) to accurately identify individuals in images.
- Utilized transformer-based architecture to handle object detection tasks with end-to-end optimization.
- Achieved robust detection performance without the need for traditional anchor boxes or post-processing heuristics.
- Technology Used: Python, PyTorch, DETR, OpenCV.

Waste Classification Using Transfer Learning | [Link](#)

Waste Classification Using Transfer Learning

- Developed a deep learning system to classify waste images into Biodegradable, Recyclable, or Trash categories.
- Leveraged VGG16 with transfer learning to enhance model performance on a custom waste classification dataset.
- Built a user-friendly Flask web interface allowing real-time image uploads and predictions.
- Included performance evaluation using visualizations and dashboards created with Pandas, Matplotlib, and Seaborn.
- Technologies Used: Python, TensorFlow, Keras (VGG16), Flask, HTML, CSS, Scikit-learn, Pandas, Matplotlib.

EXPERIENCE

•Summer Intern [National Institute of Technology , Andhra Pradesh]

May - July 2025

Project:Drone Enabled DeepLearning Disease detection

Offline

- Converted drone-captured videos into individual image frames to create a large dataset for model training.
- Removed overlapped or redundant frames using spectral similarity metrics to retain only diverse, informative images.
- Automated image labeling using superpixel segmentation to reduce manual annotation effort.
- Designed a hybrid architecture with a Vision Transformer (Swin encoder and U-Net decoder for accurate segmentation).
- Extracted vegetation indices (NDVI, NDRE, EVI), texture, and reflectance features for disease detection and yield estimation.
- Applied multi-scale prediction loss during training to enhance performance at multiple spatial resolutions.

TECHNICAL AND NON TECHNICAL SKILLS

Languages: C, Python, Java

Libraries : NumPy, Pandas, Scikit-learn, TensorFlow, PyTorch, Keras, Matplotlib, Seaborn, OpenCV

Web Dev Tools: HTML, CSS, JavaScript,flask,Streamlit, VScode, Git, Github

Frameworks: TensorFlow, PyTorch

Cloud/Databases:MySql

Soft Skills: Self-learning, Team Work, Adaptability

CERTIFICATIONS

Deep Learning | **NPTEL CERTIFICATE**

Introduction to Machine Learning | **NPTEL CERTIFICATE**

Vizualising data with Python | **edX CERTIFICATE**

Generative AI Leader | **Google Cloud CERTIFICATE**

HTML | **Udemy CERTIFICATE**