KRISHNAM SAI VARUN REDDY

6309441631 | krishnamsaivarunreddy@gmail.com | se23maid008@mahindrauniversity.edu.in | LinkedIn | Hyderabad,Telangana

PROFESSIONAL SUMMARY

Motivated and detail-oriented AI and Data Science postgraduate student at Mahindra University with strong proficiency in Python, SQL, Machine Learning, Deep Learning, and Natural Language Processing. Experienced in using tools and frameworks such as TensorFlow, Keras, OpenCV, and Hugging Face for developing end-to-end data-driven solutions. Contributed to impactful academic projects including skin lesion classification using Vision Transformers and cognitive disease prediction through NLP pipelines. Served as a Teaching Assistant, demonstrating strong leadership, communication, and mentoring skills. Passionate about applying AI to real-world challenges through innovative, scalable, and ethical solutions.

Education

Mahindra University — Hyderabad, Telangana
Master of Technology in Artificial Intelligence and Data Science — *CGPA: 75%(Till 3nd Semester)*
Aug 2023 – Jun 2025

Madanapalle Institute of Technology and Science — Madanapalle, Andhra Pradesh
Bachelor of Technology in Electronics and Communication Engineering — *CGPA: 7.77%*
Jun 2019 – Jun 2023

Chaitanya Junior College — Senior Secondary (XII);
July 2017 – May 2019 — *CGPA: 8.2%*

EXPERIENCE

Teaching Assistant — Mahindra University
Hyderabad, Telangana — *Aug 2023 – Till now*

- Supported students in learning AI and data science concepts.
- Assisted professors with course material and grading.

Projects

Skin Lesion Classification Using Transfer Learning with VGG16-CBAM and ResNet50

- **Technologies:** Python, TensorFlow, Keras, OpenCV, NumPy
- Utilized pre-trained VGG16 and ResNet50 models with CBAM attention and data augmentation to classify non-malignant skin lesions.
- Improved classification accuracy and interpretability by highlighting critical features relevant to early diagnosis.

Enhancing Early Diagnosis of Non-Malignant Skin Lesions through Vision Transformer Image Analysis

- **Technologies:** Python, Transformers, PyTorch, scikit-learn, OpenCV
- Implemented Vision Transformer (ViT) using the `google/vit-base-patch16-224` checkpoint to classify dermatological images.
- Leveraged transformer-based architecture to improve accuracy and inference efficiency in medical image classification.

NLP Enabled Cognitive Disease Prediction Model

- **Technologies:** Python, BERT, Hugging Face Transformers, scikit-learn, SVM
- Built a lightweight model to predict dyslexia from handwriting-derived text using BERT embeddings and SVM.
- Processed handwritten text for feature extraction to enable early-stage cognitive disease screening.

Skin Disease Classification with ADASYN + SMOTE Using VGG16 and ResNet50

- **Technologies:** Python, TensorFlow, Keras, scikit-learn, imbalanced-learn, NumPy, Matplotlib

- Implemented a hybrid oversampling approach combining ADASYN and SMOTE to balance a 15-class imbalanced skin disease dataset.
- Used pre-trained VGG16 and ResNet50 models for deep feature extraction and trained a dense neural network classifier on the balanced dataset.
- Achieved improved classification accuracy and robustness across minority classes, validated with precision, recall, F1-score, and confusion matrix.

Design of 256 Bytes 10T SRAM for Low Power Applications

- **Technologies:** HSPICE, Cadence, 22nm Technology Node
- Designed a 256-byte PROP10T SRAM cell optimized for low power consumption and stability.
- Evaluated design parameters through Monte Carlo simulations using HSPICE at the 22nm node.

Design and Implementation of CMOS NAND Gate Using HSPICE

- **Technologies:** HSPICE, CMOS Design, Digital Logic Analysis
- Analyzed various multi-input CMOS NAND gate designs to evaluate propagation delay and power efficiency.
- Compared implementation metrics to determine optimal design configurations for digital circuit performance.

Skills

Programming Languages: Python, HTML, CSS, JavaScript

Data Science & AI: NumPy, Pandas, Matplotlib, Seaborn, TensorFlow, Keras, OpenCV, PySpark, Hugging Face

Generative AI: LangChain, Retrieval-Augmented Generation (RAG), AI Agents

Subjects: Machine Learning, Deep Learning, Natural Language Processing

Web Development: Flask

DevOps & Version Control: Docker, Git, GitHub

Database Technologies: SQL, DBMS

Systems & Networking: Networking Technologies

Tools: Postman, Test Rigor

Languages: Telugu (Native), English (Professional), Hindi

Certifications

AI For Everyone Jun 2021
Coursera — University of Michigan

Soft Skills Development Aug 2022
NPTEL — IIT Roorkee

MATLAB Onramp Nov 2021
MathWorks

Crash Course on Python Jun 2022
Google (Coursera)