VAMANA SESHA SAI SIDDARTHA KOPPAKA

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EDUCATION

Indiana University, Bloomington. *May 2025*
Master of Science in Computer Science
Courses: Applied Machine Learning, Applied Algorithms, Elements of AI, Computer Vision, Software Engineering.

Gurukula Kangri (Deemed to be University) *May 2023*
Bachelor of Technology in Computer Science and Engineering CGPA : 3.5/4.0
Courses: Data Structures, Big Data Analytics, Software Engineering, Data Mining, Artificial Intelligence.

EXPERIENCE

AI/ML Developer Intern *Hyphenova*
Internship

- Developed and fine-tuned a BERT model for detecting bad and abusive words using data scraped from various internet sources and social media platforms like Reddit, YouTube, TikTok, Twitter, and Instagram.
- Collaborated with the team to create and deploy inference mechanisms for real-time processing of abusive language detection models on cloud platforms.
- Enhanced hate speech classification by developing specialized ML models to distinguish between different types of abuse, including racial, sexual, and political, improving overall model accuracy.

PROJECTS

Hate Speech Recognition For Telugu Language
Academic Research | PyTorch, HuggingFace-models, Large Language Models, Transformers

- Led a groundbreaking initiative employing cutting-edge AI, including BERT, RoBERTa, NLLB, Llama, and Falcon, to address hate speech in Telugu, achieving 98.2 % detection accuracy across 50,000 tweets.Pioneered enhancements in NLLB attaining an accuracy of 95%.
- Deployed the models on Huggingface, creating an interactive web interface using Flask, interlinked with Huggingface Inference for seamless real-time predictions.

Lung Cancer Detection using Chest X-rays
Academic Project | PyTorch, Keras, DICOM processing libraries, OpenCV, PIL, Scikit-learn

- Spearheaded a transformative lung cancer detection project, leveraging OpenCV for image preprocessing and augmentation of chest X-rays, culminating in a robust convolutional neural network (CNN) with a 91% accuracy rate in distinguishing between normal and pneumonia cases.
- Successfully deployed the lung cancer detection model using Streamlit on Streamlit Cloud, providing an accessible and interactive web application for real-time predictions and visualizations.

Iris Authentication using Vision Transformer
Academic Research | PyTorch, Computer Vision, Vision Transformer, OpenCV, Hugging-Face

- Developed a Cancelable Iris Template employing Vision Transformers (ViTs) to bolster security and reduce the risk of data breaches, leveraging iris image feature vectors for training which eliminates the need for cloud storage.

TECHNICAL STRENGTHS

- **Programming & Skills :** Python, R, C, SQL, JavaScript, Data Structures and Algorithms.
- **Software & Tools :** Machine Learning (using Scikit learn, PyTorch and tensorflow), Natural Language Processing, Computer Vision, DataBricks, Docker, Git, MS Excel,Tableau, Power BI.