Saketh Polavarapu

sakethpolavarapu@usf.edu • GitHub • LinkedIN • (813)-520-9562

EXPERIENCE

EasyStepIn, Bengaluru, India   July 2023 - November 2023

Full Stack Development Intern - Python, NumPy, Data Analysis.

- Worked on developing 'MeePaisa' an app that offers B2B, B2C and D2C e-commerce business models.
- Created a customer-facing and internal interactive dashboard to track KPIs and goals and effectively communicated complex data-driven recommendations to key 5+ stakeholders.
- Collaborated with the management department and interns to develop a scalable recommender system for a Fortune 500 client, recommending HR case solutions, resulting in a **40% increase in efficiency**.

Shiash, Chennai, India   April 2023 – June 2023

Data Science & ML Intern - Python, TensorFlow, AWS, Flask, NLP, API.

- Implemented Python OCR scripts in our CRM Management System utilizing Optical Character Recognition. Introduced features such as automated data entry and smart data extraction which improved overall system efficiency. This **reduced manual data entry by 35%** and **enhanced accuracy by 25%.**
- Migrated training data to S3 buckets and built a data pipeline to automate model training using AWS sagemaker's factorization machines, resulting in 30% increase in model accuracy and 19% reduction in prediction time.

PROJECTS

EmoTune | *Llama 2 7B, RLHF, Pytorch, GitHub, Chroma DB*

- Developed EmoTune to address the challenge of maintaining emotional and content **accuracy in text summarization** for applications like news media and customer feedback analysis. Utilized **RLHF** with the **trlX framework on Llama 2 7B**, enhancing summary relevance and emotional tone, evidenced by a **ROUGE-1 score increase from 0.40 to 0.75.**

Audio less Video to Speech Conversion | *AV-Hubert, Pytorch, TensorFlow, Self-supervised Learning, Computer vision*

- Created an innovative system to convert **silent videos into speech**, enhancing accessibility for those with hearing impairments or in silent environments. Employed **AV-HuBERT and computer vision** to interpret visual cues like lip movements, **achieving 95.88% accuracy**, with the research published at the **2024 ICIACS conference**.

Resilient Darknet Detection| *Transfer Learning, Dynamic Ensemble Learning, Adversarial Learning, Computer Vision*

- Developed a resilient system to **enhance darknet traffic detection, addressing evolving cybersecurity threats** using advanced AI techniques. Leveraged transfer learning for adaptability across diverse darknet datasets, **achieving 98.8% accuracy** with Random Forest for traffic classification. Incorporated **dynamic ensemble learning** and **GAN-based adversarial training** to mitigate class imbalance and improve system robustness, with the research published at the **2024 International Conference on Intelligent Systems for Cybersecurity (ISCS).**

PUBLICATIONS

Conversion of Audioless Video to Speech Using AV-HuBERT Algorithm

International Conference on Intelligent and Advanced Computing Systems (ICIACS), 2024

DOI: 10.1007/978-3-031-69201-7_32

Resilient Darknet Detection with Transfer Learning and Ensemble AI

International Conference on Intelligent Systems for Cybersecurity (ISCS), 2024

DOI: 10.1109/ISCS61804.2024.10581038

TECHNICAL SKILLS

Programming Languages:	Python, R, C++
Libraries & Frameworks:	PyTorch, TensorFlow, Hugging Face Transformers, Designing, Implementing, Training, Fine-tuning Machine Learning
Machine Learning & AI:	Text classification, Preprocessing, feature engineering, and transforming raw data for machine learning models
DevOps & Cloud:	Azure, Google Cloud Platform, Docker

EDUCATION

MUMA College of Business, University of South Florida, Tampa   August 2024 – Expected May 2026

Master of Science in Artificial Intelligence and Business Analytics, GPA – 3.89 / 4.0

SRM Institute of Science and Technology (SRM), Chennai, India   September 2020- May 2024

Bachelor of Technology in Computer Science, GPA – 3.63 / 4.0