Siddhartha Mallavolu

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EDUCATION

VELLORE INSTITUTE OF TECHNOLOGY — Chennai, T.N
Bachelor of Technology CGPA – 7.78 — Expected July 2026
Major in Computer Science and Engineering

BHASHYAM JUNIOR COLLEGE (11TH & 12TH) – 90.9% — 2020 – 2022
SR VENKATESWARA BALAKUTEER (10TH) – 91.8% — 2020

Languages and Framework: C/C++, Python, TensorFlow, Pytorch, NumPy, Matplotlib, Metasploit.

Software: BurpSuite, Wireshark, Cisco Packet Tracer, Git/GitHub.

Certifications: Supervised Machine Learning: Regression and Classification, Foundations of Cybersecurity

WORK EXPERIENCE

SAMSUNG PRISM — Chennai, TN
Project Intern — Dec 2023 – Sep 2025

- Developed an **Audio-Visual Source Separation Engine** leveraging Deep Learning to isolate sound sources from mixed audio-visual inputs with high efficiency.
- Optimized model performance to achieve **faster inference** while maintaining high fidelity, making it suitable for real-time applications in AI-driven media processing.

STEMTEC — Chennai, TN
AI Intern — Feb 2024 – Jul 2024

- leading **Computer Vision Development** for robotic systems, enhancing object detection and spatial awareness for improved autonomous navigation.
- Contributed to AI-driven robotics, ensuring **smarted automation with advanced perception capabilities.**

Drema AI — Mumbai, MH
AI/ML Engineer Intern — Apr 2024 – Sep 2024

- Architected **scalable AI models**, optimizing logic and data pipelined for increased efficiency and accuracy.
- **Brought in a couple of clients,** expanding the company's AI service portfolio and contributing to business growth.
- Spearheaded **data analysis and feature engineering,** ensuring robust AI-driven insights and decision making.

PROJECTS

Audio-Visual Source Separation with Localization and Individual Control [Link to journal]

- Conducted original **research** on the topic, manuscript published in ***PLOS ONE*** journal.

HPC-Enabled Lung Cancer Detection [Github]

- Developed an HPC-accelerated deep learning model for lung cancer detection using CT scans, integrating **ResNet50, MobileNetV2, and DenseNet121**. Achieved **97.6% accuracy**, significantly surpassing the baseline, while ensuring **real-time inference** for clinical applications.

Anomaly Detection System in Network Traffic [Github]

- Developed an XGBoost-based anomaly detection system with 99% F1-score, optimized via GridSearchCV and early stopping. Used SHAP for feature importance to ensure transparency, and deployed the model in a scalable production setup for real-time network threat detection.

Real Time Speech Translation System [Link] [Github]

- An advanced AI-powered speech translation system that automatically detects spoken language, translates it to your target language, and generates natural-sounding speech output. Built with modern machine learning technologies including OpenAI Whisper, enhanced translation engines, and text-to-speech synthesis.