LAXMI CHANDRA SHEKAR AVIRE

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Objective

AI and Data Science enthusiast with a B.Tech major in AI and Data Science. Strong background in machine learning, NLP, and computer vision, with experience in developing AI-driven solutions, including GenAI-powered Lip-Sync video translation and depth-based staircase detection. Published researcher with hands-on expertise in machine learning.

Education

Indian Institute of Information Technology, Design, and Manufacturing, Kurnool	**2021 – Ongoing**
B.tech in Artificial Intelligence and Data Science	*CGPA - 7.50*
FIITJEE Junior College	**2019 – 2021**
Intermediate	*Percentage - 93%*
SR Sai Public School	**2018 – 2019**
Class X, ICSE	*Percentage - 95%*

Projects

1. **Automatic Lip-Sync video translator** ⬡.   **12/2024 - 4/2025**
   - Developed a GenAI and NLP-powered video translation system that translates videos from 100+ languages into Indian languages (Telugu, Hindi, Marathi, Kannada, Bengali) while ensuring accurate lip-sync, preserving the speaker's voice, and maintaining temporal and global consistency. The generated videos are indistinguishable from authentic content, making them resistant to deepfake detection. Communicated at **BJIT**. Visual Result at Demo Result.

2. **StairDepth: A Novel Staircase detection** ⬡.   **7/2024 - 10/2024**
   - Developed a cost-effective staircase detection system by elimating the need for physical depth sensors for robotic locomotion and individuals with visual impairments, capable of functioning in challenging conditions (low light conditions, irregular staircases etc). **This research has been published at BJIT,** DOI: 10.1007/s41870-025-02438-8.

3. **SQL Data Analysis Project: Pizza Sales Analysis** ⬡.   **11/2024**
   - Conducted a comprehensive analysis of a PizzaHut database to derive actionable insights on sales trends, customer preferences, and revenue distribution.

Publications

1. **Laxmi Chandra Shekar Avire**, Bhuvana Chandrika M, Hemanth Naidu V, Dr. Naresh Babu M. *"StairDepth: A novel Staircase Detection through Depth Maps Generated by Depth Anything V2"* *International Journal of Information Technology, Singapore.* DOI: 10.1007/s41870-025-02438-8.

2. **Laxmi Chandra Shekar Avire**, Bhuvana Chandrika M, Hemanth Naidu V, Dr. Naresh Babu M. *"Multilingual Video Translation to Indian Languages with Enhanced Temporal and Global Lip-Sync Consistency"* *International Journal of Information Technology, Singapore.* Status: communicated.

Experience

Project Intern at Defence Electronics Research Laboratory, Hyderabad   **12/06/2024 – 31/08/2024**

Project Title: Development of AI Systems - Design and Testing Perspective

- Collaborating on the design and implementation of AI systems for Medical applications.
- Conducting rigorous testing and evaluation to ensure system reliability and efficiency.

Skills

Programming Languages: Python, C, C++, MySQL, HTML, CSS
Data Analysis and Visualization: PowerBI, Tableau, Excel
Machine Learning: Deep Learning, Computer Vision, NLP, GenAI, Image Processing
NLP & Speech Processing: ASR (Speech-to-Text), NMT (Text-to-Text Translation), Lip-Sync Modeling, Voice Specification, BERT, HuBERT
Frameworks: Hadoop, Spark, Docker, ReactJS
Version Control: Git, GitHub