U K Samarth

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Education

KLE Technological University, Hubli   2021-2025
Bachelor of Electronics and Communication   *Hubli, Karnataka*
- **CGPA:** 8.16 (until 5th sem)
- **Relevant Coursework:** Data Structures and Algorithms (C), 8051 Micro-controller, Arm7 Micro-controller, Machine Learning (Python), OOPs

Jawahar Navodaya Vidyalaya, North Canara   2014-2021
Secondary and Senior Secondary Education   *Mundgod, Karnataka*
- X - 89.16%
- XII - 91.16%

Experience

Center of Excellence in Visual Intelligence(CEVI)   Aug 2023 – Present
Project Trainee   *Hubli, Karnataka*
- Implemented Underwater Image Enhancement towards NeRF based 3D reconstruction.
- Working on Transformer based Multi-modal framework for Expression recognition.

Projects

Underwater Image Enhancement towards NeRF-based 3D Reconstruction | *Image Processing, NeRF, Python, Meshlab*
- This project focuses on enhancing underwater images and utilizing these enhanced images for NeRF-based 3D reconstruction.
- Underwater imaging presents challenges such as haze, color distortion, low contrast, and loss of visibility. By improving the quality of underwater images, we aim to achieve more accurate 3D reconstructions using NeRF (Neural Radiance Fields) technology.

A Deep Learning approach for Kannada handwritten character recognition | *Machine Learning, Python, TensorFlow, PyTorch*
- Developed a deep learning model using Convolutional Neural Networks (CNN) for Kannada handwritten character recognition.
- Utilized transfer learning techniques with pre-trained CNN models to improve recognition accuracy.
- Experimented with a dataset sourced from Kaggle, consisting of 16 classes of 50 images each, for training and testing the model.
- Achieved an impressive accuracy of 97.50% in character recognition after training the CNN model for just 50 epochs.

Transformer based Multimodal Fusion for Facial Expression Recognition | *Python, Multimodal Machine Learning*
- Working on Real time facial expression recognition using different modalities like visual, audio and text.

Technical Skills

Languages: C , C++ , Python , Embedded C
Technologies: Git , GitHub , TensorFlow, PyTorch , OpenCV, Linux , LPC2148 , Matlab , NeRF , Meshlab
Concepts: Image Processing , OOPs, Machine Learning, Neural Networks, Deep Learning , Computer Networks , Computer Vision , Microcontroller 8051 , Arm7 Microcontroller , LPC2148 Microcontroller , Digital Signal Processing

Certifications

Machine Learning A-Z: AI, Python   Feb. 6, 2024
Udemy   *Online*
- Machine Learning, Deep Learning, Python, Convolutional Neural Network, Regression, Classification, GitHub.

The Complete Python Course   Sept. 9, 2023
Udemy   *Online*
- Python, OOPs, Data Structures and Algorithms, GitHub.