AKELLA SRI VENKATESWARLU

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Asv53 (AKELLA SRI VENKATESWARLU) (github.com)

A passionate and determined individual possessing great leadership qualities and problem-solving capabilities. Looking forward to work in Artificial intelligence and data analytics domains.

EDUCATION:

CVR College of Engineering	Electronics and Communication Engineering (MAJOR) · **8.97** CGPA	**2020 - 2024**
CVR College of Engineering	Artificial Intelligence and Machine Learning (MINOR) · **7.29** CGPA	**2022 - 2024**
Sri Nalanda Junior College	MPC · **95.6**%	**2018 - 2020**
Nava Bharat Public School	AISSC · **88.6**%	**2017 - 2018**

PROJECTS:

Image super resolution using ESRGAN (Enhanced Super Resolution Generative Adversarial Network)

- To increase the resolution of the input to four times (**x4**).
- Compared to the previous methods like Bicubic Interpolation, we were able to achieve higher quality images.
- Implemented with **ESRGAN** with PyTorch.
- **PSNR** (**P**eak **S**ignal to **N**oise **R**atio), and **SSIM** (**S**tructural **SIM**ilarity) were taken as metrics for evaluation.
- Datasets: URBAN100, OST300, BSD100, SET14, and SET5.

A hybrid approach for classification and segmentation of Pneumonia from CXR-images

- **C**ontrast **L**imited **A**daptive **H**istogram **E**qualization + **C**onvolutional **N**eural **N**etwork + **P**rincipal **C**omponent **A**nalysis + **E**xtreme **L**earning **M**achine + **U-Net.**
- This project consists of two parts: 1. Classification and 2. Segmentation.
- In classification, determine whether the image has pneumonia or not. The method followed **is CLAHE+CNN+PCA+ELM** and achieved an accuracy of **98.65**%.
- In segmentation, identify the areas affected by pneumonia using **U-Net** and achieved an accuracy of **89.32%**.
- Implemented with PyTorch,
- Datasets: Chest X-Ray images (CXR Images), and RSNA Pneumonia Challenge Dataset from Kaggle.

Sentiment analysis using sequential deep learning model

- To classify whether the given tweet is depressive or not.
- This functionality is useful for companies for **content moderation**.
- Implemented using Keras.
- Flow consists of **Data preprocessing + Word2vec + Embedding matrix + CNN + LSTM**.
- Dataset: sentiment140

Pneumonia detection using Alex Net

- To detect whether the CXR image has Pneumonia or not.
- Based on **transfer learning**, in this approach a modified model architecture is used with 2 classes (NORMAL, PNEUMONIA) for classification.
- Used **Alex Net** as the pretrained model and PyTorch as the framework.
- We achieved an accuracy score of **82.75%.**
- Dataset: Chest X-Ray images (CXR Images)

Building segmentation using detectron2

- To identify buildings from satellite images.
- This is useful in remote sensing, and military applications.
- Based on **detectron2** model developed by **META** using PyTorch.
- Dataset: building-detection Image Dataset from roboflow.

SKILLS:

MS Office, Python, C, AI and ML, MySQL, PyTorch, NumPy, Pandas, Matplotlib, cv2, nltk, Adobe Photoshop, Adobe Premiere Pro, Adobe Illustrator, MATLAB, NI Multisim, ADB and Fastboot.

CERTIFICATIONS:

AMCAT

Data Processing Specialist
Software Engineer Product

EBOX

Python

Wipro Future Skills

AI Foundation
Managing AI Applications
Cloud and AWS: Intro
Microsoft Azure Foundation
Google Cloud Overview
Cloud Computing Foundation
Cisco IoT Foundation

ACHIEVEMENTS:

Published a research paper in IEEE on "**Deep Learning for Image Upscaling: Exploring the Potential of ESRGAN**"

LANGUAGES KNOWN:

English, Hindi, Telugu

HOBBIES:

Following Current Affairs
Editing Photos and Videos
Playing video games