Hemanth Kumar CS

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Summary

An independent and self-motivated student with proven ability and experience in developing Machine Learning and Data Science projects with DS and Algo. I have also participated in various competitions of competitive programming. Recognized by professors, colleagues, and peers as a personable, dedicated performer who demonstrates innovation, communication, and teamwork to ensure quality, and timely project completion. Won 2nd Runner up in Robotics Club Competition.

Skills

Languages	:	Python
Libraries	:	Numpy, Pandas, Matplotlib, Seaborn, Tensorflow, Pytorch, OpenCV, NLTK
Databases	:	MongoDB, SQL
Tools	:	Visual Studio Code, Jupyter Notebook, Pycharm, Colab, Linux, Arduino IDE

Strength

Positive Attitude	:	To progress positively under all circumstances with conviction and maturity in approach.
Adaptability	:	To adapt accordingly under the application of adverse or pressure conditions without deviating from critical to quality concerns.
Enthusiasm for Learning	:	Endlessly strives to learn through different activities.

Education

Sri Sairam Institute of Technology — West Tambaram,Chennai

Bachelor of Technology in Artificial Intelligence and Data Science — *3rd year*

Projects

Face Recognition and Biometrics in PDS — *OpenCV,Tkinter,Haarcascade Frontal Face algorithm* — Source Code

- The Face recognition application is build in Python using **Haarcascade Frontal Face algorithm** .
- It collects the user details and photos which are used to train and tested at the recognition part
- Presented and Published in **International Conference(ICEECS 2022**
- Got Patent in **Indian Patent Rights**

Cancer Tissue Classification — *Python, Tensorflow, Neural Networks* — Source Code

- From **Tensorflow** the **Keras** library is used to design the Neural Network using the Sequential function
- **ImageDataGenerator** from keras is used to pre-process the input images and the model is used to predict whether a tissue is a Cancerous or non-Cancerous

Newspaper Segmentation using YOLO — *Python, Tensorflow, Darknet, YOLO weights* — Source Code

- The **YOLO** is the most powerful object detection algorithm,which is used for a custom dataset
- The dataset is created using **LabelStudio** with four classes namely **Headline, Logo, Image, Text**
- Some configuraions are made to the yolov3 .cfg file according according to the dataset
- The trained model is exported in .weight file using which the prediction are made for the test data

Machine Fault Prediction using RNN and LSTM — *Python, Tensorflow, RNN, LSTM* — Source Code

- This project is just done for fun. Instead of using Machine Learning algorithms, just tried of the neural network model in a Sequential data format.
- Genrally RNN is used for natural language processing to predict the next word or used in computer vision to write a sentece that what's happening in an image scene.
- So, here I just tried out the **Recurrent Neural Network(RNN)** for .csv based file where it contains the readings of 52 sensors for fault prediction.
- And to overcome the **Stochastic Gradient Problem** The **Long Short Term Memory(LSTM)** is used to improve the accuracy of the model.