Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation:

PS Code: SS591

Problem Statement Title: Deep Learning based Cyclone Intensity estimation using INSAT-3D IR imagery

Team Name: Underfitters

Team Leader Name: Harshit Kumar
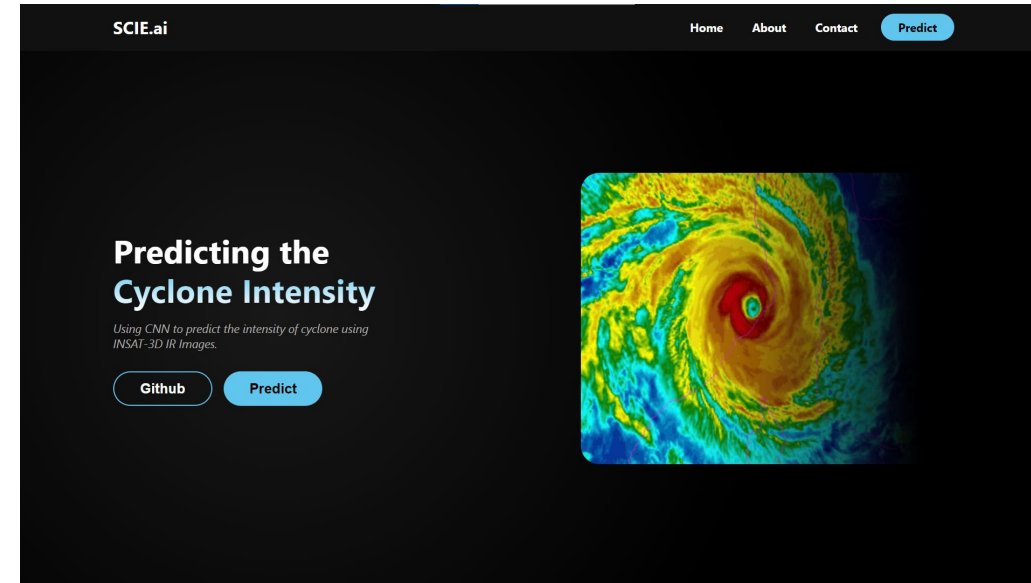
Institute Code (AISHE): U-1056
Institute Name: Netaji Subhas University of Technology

Theme Name: Disaster Management

Idea/Approach Details

☐ We have made a Convolutional Neural Network-based architecture that uses Deep learning to estimate the intensity of cyclones using INSAT-3D satellite images.

☐ Our model gives around 90% accuracy as of now and we plan to increase it further in the coming future.

☐ We have also made a web application that would take an image as an input and give the prediction in a very user-friendly way.

☐ Our Aim is to forecast eddy currents that causes cyclones several hours prior to them happening.

☐ Also we plan to predict wind speed and use latitude and longitude to predict better accuracy of model.

Technologies -

● Python
● Tensorflow(keras)
● React
● Javascript
● CNN
● Fast api

Idea/Approach Details

Describe your Use Cases here

 Website receives an image

 It is then run in our ml model

 Initially our model can predict an image containing cyclone or not.

 Further down the line we hope to identify various parts of cyclone and regress cyclone intensity levels

What issues we might face:-

Lack of dataset
Data Inconsistency
Complexity

Team Member Details

Harshit Kumar

Branch (Btech/Mtech/PhD etc): Btech   Stream (ECE, CSE etc):   EE   Year (I,II,III,IV): 1

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