

PROJECT DEVELOPMENT PHASE

SPRINT-4

Date	15 November 2022
Team ID	PNT2022TMID12341
Project Name	Natural Disaster Intensity Analysis and Classification using Artificial Intelligence

INTEGRATE THE WEB APP WITH AI MODEL:

After creating the Model, the Model should be integrated with the web app using the Flask application. The coding part is named as app.py and it will be running in the localhost through the generated link. By navigating the localhost the webpage will be visible.

```
73     output = frame.copy()
74     #print("apple")
75     frame = cv2.cvtColor(frame, cv2.COLOR_BGR2RGB)
76     frame = cv2.resize(frame, (64, 64))
77     #frame = frame.astype("float32")
78     x=np.expand_dims(frame, axis=0)
79     result = np.argmax(model.predict(x), axis=-1)
80     index=['Cyclone', 'Earthquake', 'Flood', 'Wildfire']
81     result=str(index[result[0]])
82     #print(result)
83     #result=result.tolist()
84
85     cv2.putText(output, "activity: {}".format(result), (10, 120), cv2.FONT_HERSHEY_PLAIN,
86                 1, (0,255,255), 1)
87     #playaudio("Emergency it is a disaster")
88     cv2.imshow("Output", output)
89     key = cv2.waitKey(1) & 0xFF
90
91     # if the `q` key was pressed, break from the loop
92     if key == ord("q"):
93         break
94
95     # release the file pointers
96     print("[INFO] cleaning up...")
97     vs.release()
98     cv2.destroyAllWindows()
99     return render_template("upload.html")
100
101 if __name__ == '__main__':
102     app.run(debug=False, threaded=True)
```

Output



IBM 127.0.0.1:5000/home

127.0.0.1:5000/home

Gmail YouTube Maps AI-Based-Natural-D...

Cyclone

activity: Cyclone

rain, high waves and, very

that creates seismic waves.

ground on normally dry

WildFire

Uncontrolled fire in a forest, grassland, brushland

Type here to search 29°C 10:17 08-11-2022 ENG

The image shows a web browser window displaying a dashboard with three main sections. The top section is titled 'Cyclone' and features a satellite image of a cyclone. Below the image, there is text describing the activity: 'activity: Cyclone' and 'rain, high waves and, very'. The bottom left section shows a satellite image of a cyclone with text: 'that creates seismic waves.' and 'ground on normally dry'. The bottom right section is titled 'WildFire' and features a photograph of a fire. Below the photograph, there is text: 'Uncontrolled fire in a forest, grassland, brushland'. The browser window has a single tab titled 'IBM' and the address bar shows '127.0.0.1:5000/home'. The taskbar at the bottom shows various application icons, the system clock, and the temperature.

MODEL DEPLOYMENT:

The trained model which is running in the localhost without any error is deployed in the IBM Cloud for making available for the users to predict the Disaster's type and its intensity. It is integrated with the Flask application.