

PROJECT DEVELOPMENT

PHASESPRINT-4

Date	12 November 2022
Team ID	PNT2022TMID34177
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

A screenshot of a web application interface. The browser window shows the URL '127.0.0.1:5000/home'. The page has a light gray background. At the top, there's a search bar with the text 'Type here to search'. Below it, there's a list of activities: 'Cyclone' and 'WildFire'. The 'Cyclone' activity is selected, showing a satellite image of a cyclone. The 'WildFire' activity shows a photograph of a wildfire. The taskbar at the bottom displays the system clock as 10:17 on 08-11-2022, and the temperature as 29°C.

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.