

PROJECT DEVELOPMENT PHASE

SPRINT-4

Date	12 November 2022
Team ID	PNT2022TMID25918
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

Seasonal monsoon winds that creates seismic waves.

ground

WildFire

Uncontrolled fire in a forest, grassland, brushland

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

The image shows a web application interface with a light gray background. At the top, there is a navigation bar with the IBM logo and a URL bar showing "127.0.0.1:5000/home". Below the navigation bar, there are several icons for Gmail, YouTube, Maps, and an AI-Based Natural D... application. The main content area features three large, overlapping images. The first image, titled "Cyclone", shows a satellite view of a cyclone with the text "activity: Cyclone" overlaid. The second image, titled "WildFire", shows a large fire with the text "Uncontrolled fire in a forest, grassland, brushland" overlaid. The third image, titled "Earthquake", shows a yellow excavator working on a pile of rubble with the text "activity: Earthquake" overlaid. At the bottom of the page, there is a Windows taskbar with a search bar, several application icons, and a system tray showing the date and time as "08-11-2022" and "10:17".

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.