

PROJECT DEVELOPMENT PHASE

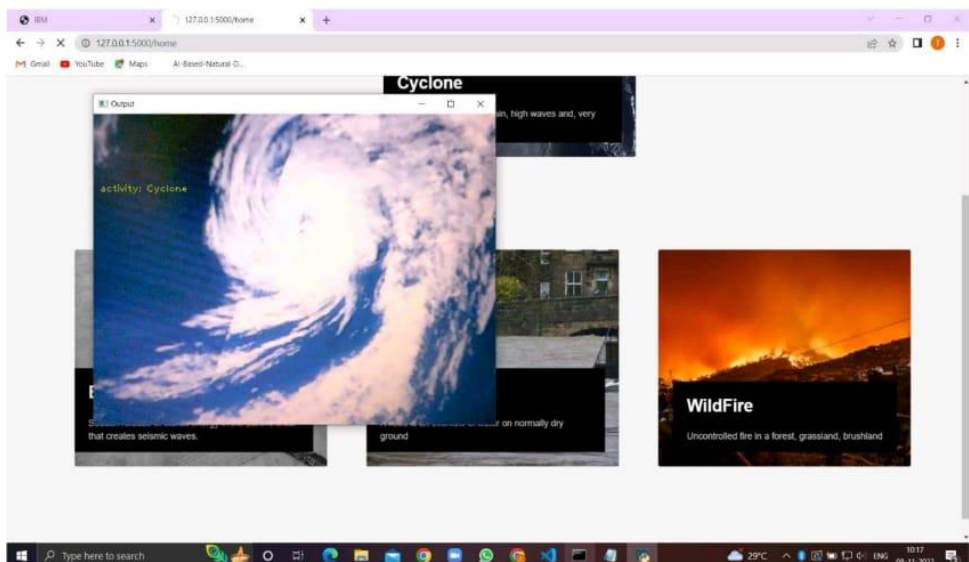
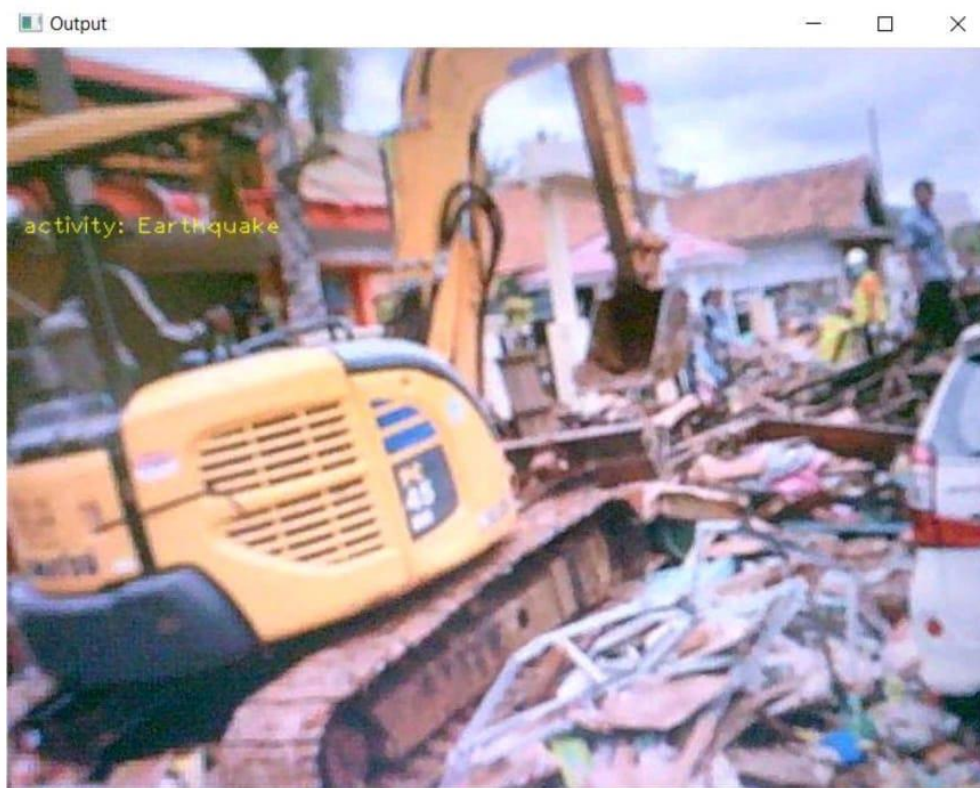
SPRINT-4

DATE	31 October 2022
TEAM ID	PNT2022TMID34298
PROJECT NAME	Natural Disasters 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 local host through the generated link. By navigating the local host 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)
```



MODEL DEPLOYMENT:

The trained model which is running in the local host 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.

The screenshot displays the IBM Watson Studio web interface. The browser address bar shows the URL: `eu-gb.dataplatform.cloud.ibm.com/ml-runtime/spaces/32e4c41f-866e-49bf-a8d1-48bf34b21/deployments?context=cpdaas`. The page title is "M_deploy". Below the title, there are tabs for "Overview", "Assets", "Deployments" (which is active), "Jobs", and "Manage". A search bar is located above a table. The table has the following columns: "Name", "Type", "Status", "Asset", and "Last modified". There is one row in the table with the following data:

Name	Type	Status	Asset	Last modified
(i) Disaster	Online	Deployed	Disaster Model	7 minutes ago MANJU D (You)

At the bottom of the table, it says "Items per page: 20" and "1-1 of 1 items". On the right side of the interface, there is a message box that says "Drop files here or browse for files to upload." and another message that says "Stay on the page until upload completes. Incomplete uploads are cancelled." The Windows taskbar at the bottom shows the time as 11:57 on 10-11-2022.