PROJECT DEVELOPMENT PHASE

SPRINT-4

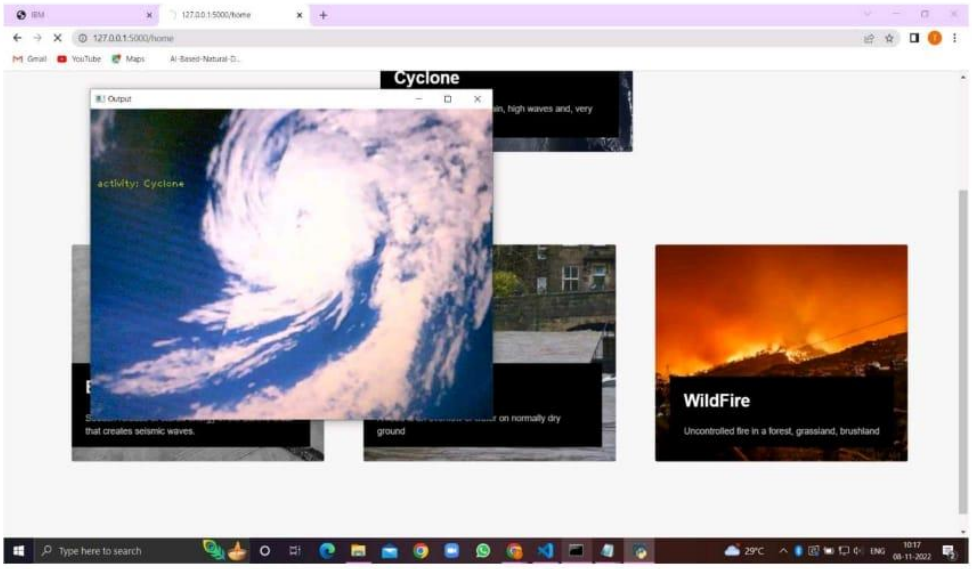
DATE	31 October 2022
TEAM ID	PNT2022TMID34298
PROJECT NAME	Natural Disasters Intensity Analysis and Classification using Artificial Intelligence

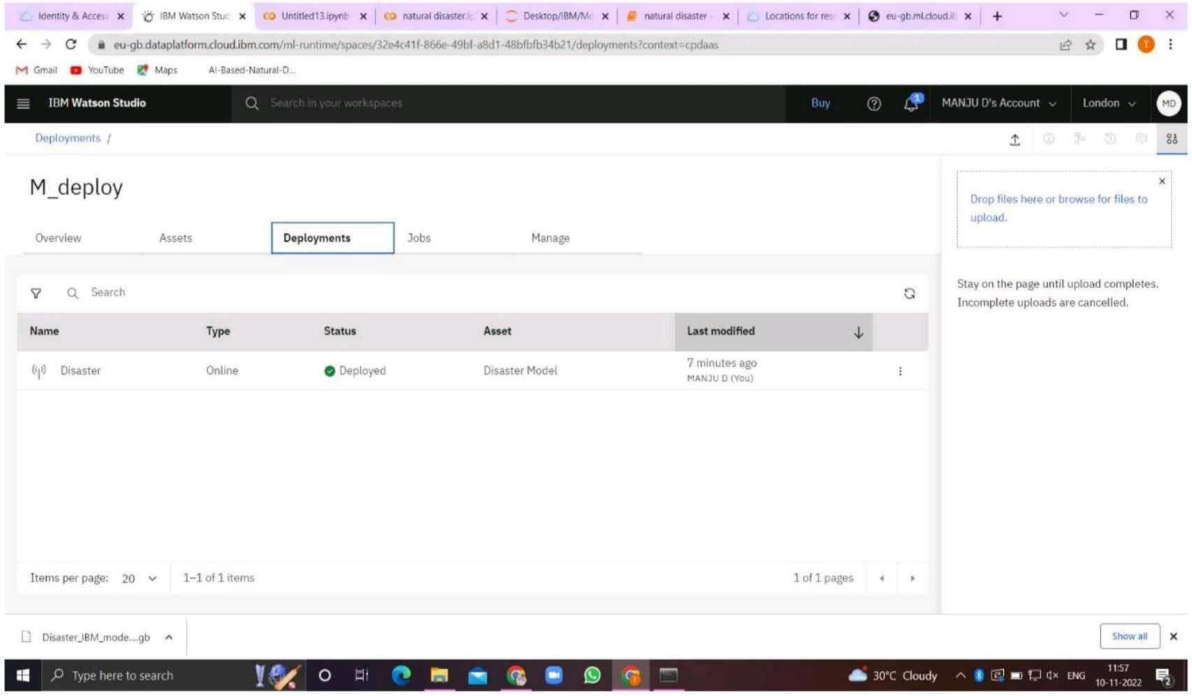
INTEGRATE THE WEB APP WITH AI MODEL:

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.

```
            output = frame.copy()
            #print("apple")
            frame = cv2.cvtColor(frame, cv2.COLOR_BGR2RGB)
            frame = cv2.resize(frame, (64, 64))
            #frame = frame.astype("float32")
            x=np.expand_dims(frame, axis=0)
            result = np.argmax(model.predict(x), axis=-1)
            index=['Cyclone','Earthquake','Flood','Wildfire']
            result=str(index[result[0]])
            #print(result)
            #result=result.tolist()

            cv2.putText(output, "activity: {}".format(result), (10, 120), cv2.FONT_HERSHEY_PLAIN,
                        1, (0,255,255), 1)
            #playaudio("Emergency it is a disaster")
            cv2.imshow("Output", output)
            key = cv2.waitKey(1) & 0xFF

        # if the `q` key was passed, break from the loop
            if key == ord("q"):
                break

        # release the file pointers
        print("[INFO] cleaning up...")
        vs.release()
        cv2.destroyAllWindows()
        return render_template("upload.html")


if __name__ == '__main__':
      app.run(debug=False,threaded=True)
```

Output
activity: Earthquake


Output
activity: Cyclone
Cyclone
WildFire
Uncontrolled fire in a forest, grassland, brushland

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.