

Week 5: Cloud and API deployment

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Submitted date: **3rd April 2025**

Internship Batch: **LISUM43**

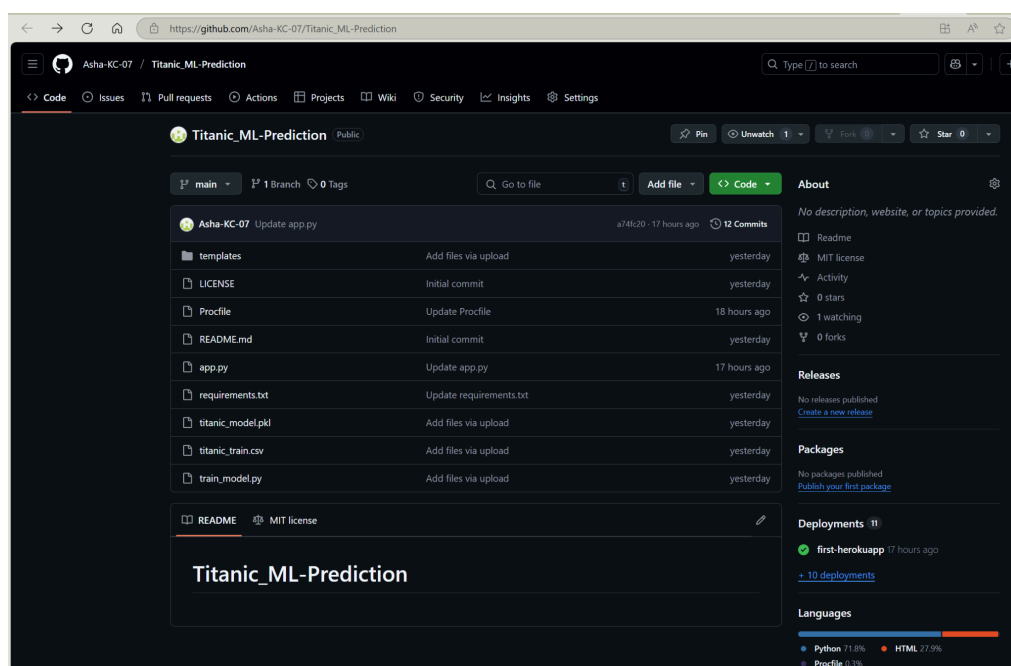
Submitted to: **Data Glacier**

Task given for Week 5 of internship is:

1. Select any toy data (simple data) (You are allowed to use data set of week 4)
2. Save the model (You are allowed to use model of week 4)
3. Deploy the model on any cloud eg: Heroku,AWS,GCP,Azure (Deployment should be API based as well as web app)
4. Create pdf document (Name, Batch code, Submission date, Submitted to) which should contain snapshot of each step of deployment)
5. Upload the document and code to Github
6. Submit the URL of the uploaded document.

The data set & model generated in Week 4 are used for this deployment. It is deployed on **Heroku**.

1. Github link to **API** : https://github.com/Asha-KC-07/Titanic_ML-Prediction



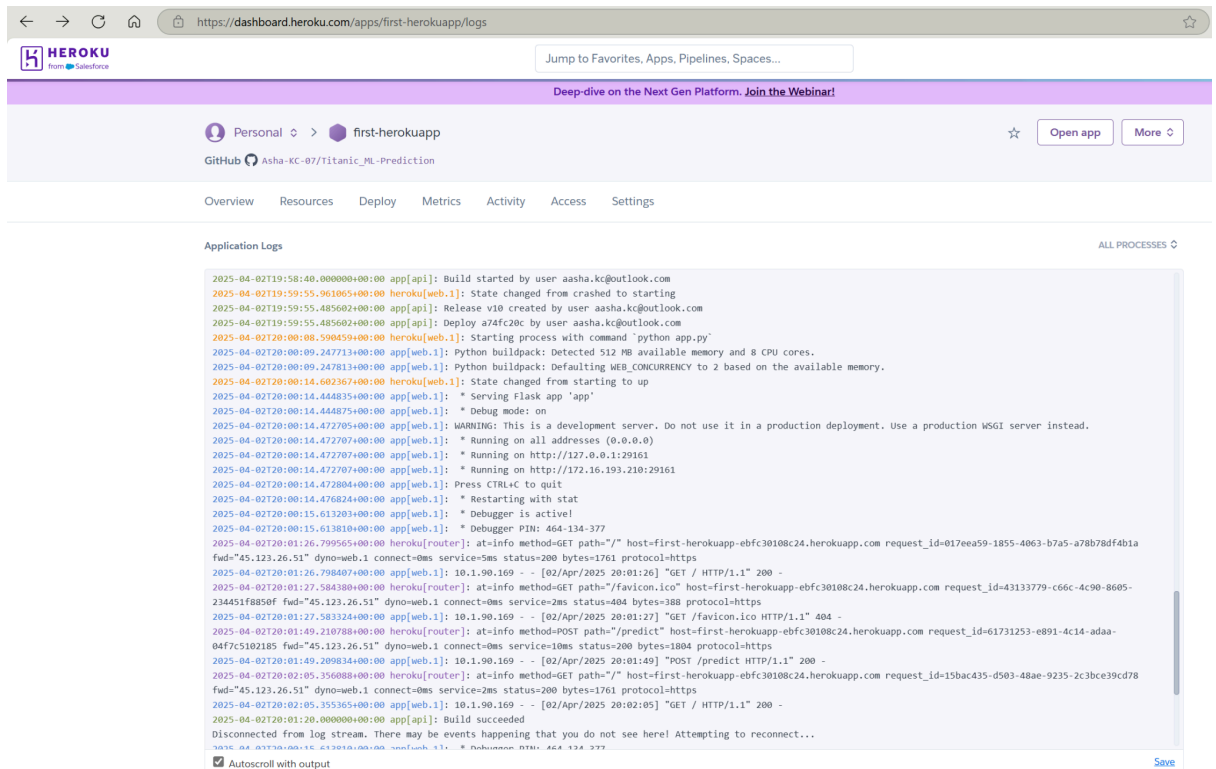
2. Heroku account created. Github connected to Heroku to deploy the above app:

The screenshot shows the Heroku dashboard for the app 'first-herokuapp'. The 'Deploy' tab is selected, showing the 'Deployment method' section where 'GitHub' is marked as 'Connected' with a green checkmark. Below this, it shows the app is connected to the repository 'Asha-KC-07/Titanic_ML-Prediction'. The 'Automatic deploys' section is also visible, indicating that the app is configured for automatic deployments from GitHub.

3. Successfully deployed app in Heroku:

The screenshot shows the Heroku dashboard for the app 'first-herokuapp' with the 'Deploy' tab selected. The 'Automatic deploys' section is highlighted, showing the 'Choose a branch to deploy' dropdown set to 'main'. Below this, the 'Deploy a GitHub branch' section is visible, showing the 'Choose a branch to deploy' dropdown set to 'main'. The 'Deploy to Heroku' button is highlighted, and the status 'Your app was successfully deployed.' is displayed at the bottom.

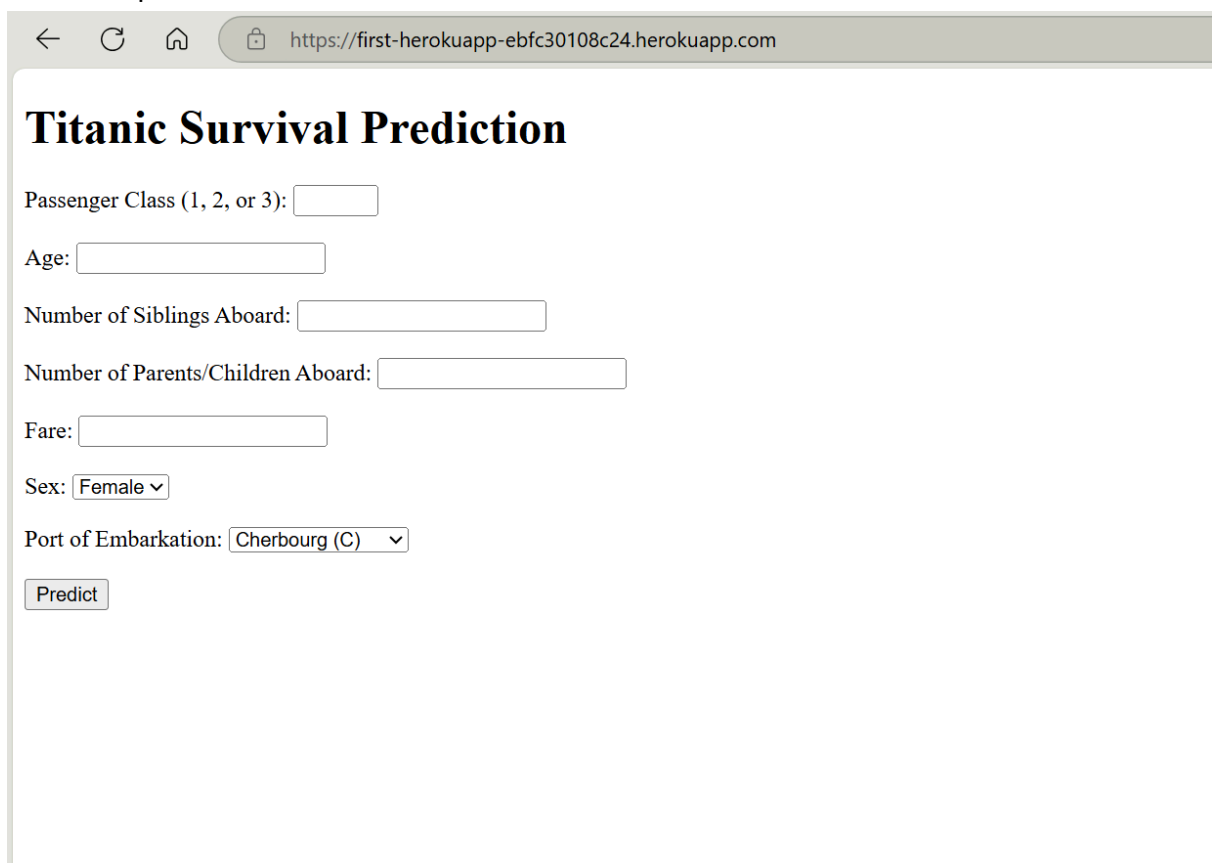
4. Application log from Heroku:



The screenshot shows the Heroku dashboard for the application 'first-herokuapp'. The 'Application Logs' tab is selected, displaying a log stream. The logs show the build process starting at 2025-04-02T19:58:40.000000+00:00, followed by the release of version v10 at 2025-04-02T19:59:55.485602+00:00. The deployment command is 'python app.py'. The logs then show the application starting at 2025-04-02T20:00:09.247713+00:00, with a warning about the development server. The application is running on http://127.0.0.1:29161. The logs also show a successful GET request at 2025-04-02T20:01:26.799655+00:00 and a successful POST request at 2025-04-02T20:01:49.209834+00:00. The logs end with a disconnected message at 2025-04-02T20:01:20.000000+00:00.

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2025-04-02T19:58:40.000000+00:00 app[api]: Build started by user aasha.kc@outlook.com
2025-04-02T19:59:55.961065+00:00 heroku[web.1]: State changed from crashed to starting
2025-04-02T19:59:55.485602+00:00 app[api]: Release v10 created by user aasha.kc@outlook.com
2025-04-02T19:59:55.485602+00:00 app[api]: Deploy a74fc20c by user aasha.kc@outlook.com
2025-04-02T20:00:08.590459+00:00 heroku[web.1]: Starting process with command 'python app.py'
2025-04-02T20:00:09.247713+00:00 app[web.1]: Python buildpack: Detected 512 MB available memory and 8 CPU cores.
2025-04-02T20:00:09.247813+00:00 app[web.1]: Python buildpack: Defaulting WEB_CONCURRENCY to 2 based on the available memory.
2025-04-02T20:00:14.602367+00:00 heroku[web.1]: State changed from starting to up
2025-04-02T20:00:14.444835+00:00 app[web.1]: * Serving Flask app 'app'
2025-04-02T20:00:14.444875+00:00 app[web.1]: * Debug mode: on
2025-04-02T20:00:14.472705+00:00 app[web.1]: WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
2025-04-02T20:00:14.472707+00:00 app[web.1]: * Running on all addresses (0.0.0.0)
2025-04-02T20:00:14.472707+00:00 app[web.1]: * Running on http://127.0.0.1:29161
2025-04-02T20:00:14.472707+00:00 app[web.1]: * Running on http://172.16.193.210:29161
2025-04-02T20:00:14.472804+00:00 app[web.1]: Press CTRL+C to quit
2025-04-02T20:00:14.476824+00:00 app[web.1]: * Restarting with stat
2025-04-02T20:00:15.613203+00:00 app[web.1]: * Debugger is active!
2025-04-02T20:00:15.613618+00:00 app[web.1]: * Debugger PIN: 464-134-377
2025-04-02T20:01:26.799655+00:00 heroku[router]: at=info method=GET path="/" host=first-herokuapp-ebfc30108c24.herokuapp.com request_id=017eea59-1855-4063-b7a5-a78b78df4b1a fwd="45.123.26.51" dyno=web.1 connect=0ms service=5ms status=200 bytes=1761 protocol=https
2025-04-02T20:01:26.798407+00:00 app[web.1]: 10.1.90.169 - - [02/Apr/2025 20:01:26] "GET / HTTP/1.1" 200 -
2025-04-02T20:01:27.584380+00:00 heroku[router]: at=info method=GET path="/favicon.ico" host=first-herokuapp-ebfc30108c24.herokuapp.com request_id=43133779-c66c-4c90-8605-234451f8850f fwd="45.123.26.51" dyno=web.1 connect=0ms service=2ms status=404 bytes=388 protocol=https
2025-04-02T20:01:27.583324+00:00 app[web.1]: 10.1.90.169 - - [02/Apr/2025 20:01:27] "GET /favicon.ico HTTP/1.1" 404 -
2025-04-02T20:01:49.210788+00:00 heroku[router]: at=info method=POST path="/predict" host=first-herokuapp-ebfc30108c24.herokuapp.com request_id=61731253-e891-4c14-adaa-04f7c5102185 fwd="45.123.26.51" dyno=web.1 connect=0ms service=10ms status=200 bytes=1804 protocol=https
2025-04-02T20:01:49.209834+00:00 app[web.1]: 10.1.90.169 - - [02/Apr/2025 20:01:49] "POST /predict HTTP/1.1" 200 -
2025-04-02T20:02:05.356088+00:00 heroku[router]: at=info method=GET path="/" host=first-herokuapp-ebfc30108c24.herokuapp.com request_id=15bac435-d503-48ae-9235-2c3bce39cd78 fwd="45.123.26.51" dyno=web.1 connect=0ms service=2ms status=200 bytes=1761 protocol=https
2025-04-02T20:02:05.355365+00:00 app[web.1]: 10.1.90.169 - - [02/Apr/2025 20:02:05] "GET / HTTP/1.1" 200 -
2025-04-02T20:01:20.000000+00:00 app[api]: Build succeeded
Disconnected from log stream. There may be events happening that you do not see here! Attempting to reconnect...
10/10 0A 03/750/00/10 613203/00/00 - heroku[web.1] 8 0.000000 0.00 464 134 377
[ ] Autocroll with output
```

5. App launch & prediction:



The screenshot shows the web application 'Titanic Survival Prediction' running on the domain 'first-herokuapp-ebfc30108c24.herokuapp.com'. The application has a white background with a black header. The title 'Titanic Survival Prediction' is in a large, bold, black serif font. Below the title, there are several input fields for user data: 'Passenger Class (1, 2, or 3):', 'Age:', 'Number of Siblings Aboard:', 'Number of Parents/Children Aboard:', 'Fare:', 'Sex:' (with a dropdown menu showing 'Female'), and 'Port of Embarkation:' (with a dropdown menu showing 'Cherbourg (C)'). At the bottom, there is a 'Predict' button.



https://first-herokuapp-ebfc30108c24.herokuapp.com/predict

Titanic Survival Prediction

Passenger Class (1, 2, or 3):

Age:

Number of Siblings Aboard:

Number of Parents/Children Aboard:

Fare:

Sex:

Port of Embarkation:

Prediction: Survived