

Week 4 Deliverable

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Batch Code: LISUM45

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Submitted to: Data Glacier

Installing seaborn using pip.

```
Command Prompt - python : x Windows PowerShell x + v
Microsoft Windows [Version 10.0.26100.4061]
(c) Microsoft Corporation. All rights reserved.

C:\Users\leena>pip install seaborn
Defaulting to user installation because normal site-packages is not writeable
Collecting seaborn
  Downloading seaborn-0.13.2-py3-none-any.whl.metadata (5.4 kB)
```

train_model.py script to load and process Titanic dataset.

EXPLORER

...

TITANIC_FLASK_PROJECT

- app.py
- titanic_model.pkl
- train_model.py

Welcome

train_model.py X

train_model.py > df

```
1 import seaborn as sns
2 import pandas as pd
3 from sklearn.model_selection import train_test_split
4 from sklearn.linear_model import LogisticRegression
5 from sklearn.preprocessing import LabelEncoder
6 import joblib
7
```

Model training and saving as titanic_model.pkl.

```
C:\Users\leena>mkdir titanic_flask_project
C:\Users\leena>cd titanic_flask_project
C:\Users\leena\titanic_flask_project>python train_model.py
Traceback (most recent call last):
  File "C:\Users\leena\titanic_flask_project\titanic_model.py", line 3, in <module>
    from sklearn.model_selection import train_test_split
ModuleNotFoundError: No module named 'sklearn'

C:\Users\leena\titanic_flask_project>pip install scikit-learn
Defaulting to user installation because normal site-packages is not writeable
Collecting scikit-learn
  Downloading scikit_learn-1.6.1-cp313-cp313-win_amd64.whl.metadata (15 kB)
Requirement already satisfied: numpy>=1.19.5 in c:\users\leena\appdata\roaming\python\python313\site-packages (from scikit-learn) (2.2.6)
Collecting scipy>=1.6.0 (from scikit-learn)
  Downloading scipy-1.15.3-cp313-cp313-win_amd64.whl.metadata (60 kB)
Collecting joblib>=1.2.0 (from scikit-learn)
  Downloading joblib-1.5.1-py3-none-any.whl.metadata (5.6 kB)
Collecting threadpoolctl>=3.1.0 (from scikit-learn)
  Downloading threadpoolctl-3.6.0-py3-none-any.whl.metadata (13 kB)
Downloading scikit_learn-1.6.1-cp313-cp313-win_amd64.whl (11.1 MB)
  11.1/11.1 MB 11.6 MB/s eta 0:00:00
MB
Downloading joblib-1.5.1-py3-none-any.whl (307 kB)
Downloading scipy-1.15.3-cp313-cp313-win_amd64.whl (41.0 MB)
  41.0/41.0 MB 16.4 MB/s eta 0:00:00
MB
Downloading threadpoolctl-3.6.0-py3-none-any.whl (18 kB)
Installing collected packages: threadpoolctl, scipy, joblib, scikit-learn
Successfully installed joblib-1.5.1 scikit-learn-1.6.1 scipy-1.15.3 threadpoolctl-3.6.0

[notice] A new release of pip is available: 25.0.1 -> 25.1.1
[notice] To update, run: python.exe -m pip install --upgrade pip

C:\Users\leena\titanic_flask_project>python train_model.py
The Model is now saved as titanic_model.pkl
```

Flask app running locally on port 5000.

```
C:\Users\leena\titanic_flask_project>python app.py
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
```

Testing API prediction using curl (JSON result).

```
MINGW64:/c/Users/leena
<h1>Bad Request</h1>
<p>Failed to decode JSON object: Expecting value: line 1 column 1 (char 0)</p>
curl: (3) URL rejected: Malformed input to a URL function
curl: (3) URL rejected: Malformed input to a URL function
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curl: (3) URL rejected: Malformed input to a URL function

leena@Leenas-computer MINGW64 ~
$ ^[[200~curl -X POST http://127.0.0.1:5000/predict -H "Content-Type: applicatio
n/json" -d "{\"age\": 22, \"fare\": 7.25, \"sex\": 1, \"embarked\": 2}"
bash: $'\302\226\E[200~curl': command not found

leena@Leenas-computer MINGW64 ~
$ curl -X POST http://127.0.0.1:5000/predict -H "Content-Type: application/json"
-d "{\"age\": 22, \"fare\": 7.25, \"sex\": 1, \"embarked\": 2}"
{
  "survived": 0
}
```

Browser confirmation of running API endpoint.

