

Practical-7

Deployment of ML project using Streamlit.

Task 1: Ensure that the required libraries are installed

```
streamlit==1.10.0
pandas==1.2.3
scikit-learn==0.24.1
```

Task 2: Create the docker file using the steps described in theory material.

a) Create a Dockerfile :

```
FROM python:3.8-slim
WORKDIR /app
COPY . /app
RUN pip install --no-cache-dir -r requirements.txt
EXPOSE 80
ENV NAME World
CMD ["gunicorn", "--bind", "0.0.0.0:80", "app:app"]
```

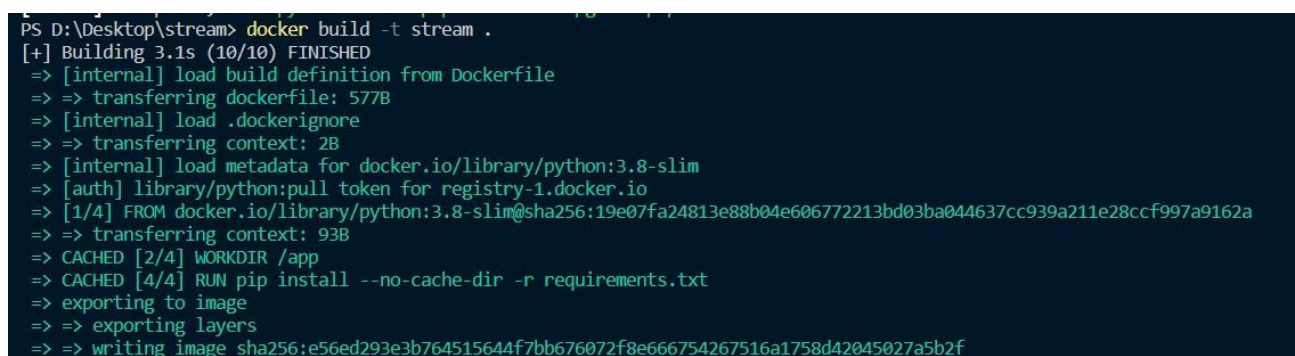
b) Create a requirement.txt file :

```
scikit-learn==0.24.2
pandas==1.3.3
numpy==1.21.2    flask==2.1.0
gunicorn==20.1.0
```

c) Create a Streamlit file :



d) Create a Docker Image :



Check the image is created or not :

```
PS D:\Desktop\stream> docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
stream	latest	e56ed293e3b7	16 minutes ago	495MB

Task 4: Run the docker container to execute the docker image and host the machine learning model using streamlit app server.

```
PS D:\Desktop\stream> docker run -p 8080:8501 stream
```

Collecting usage statistics. To deactivate, set browser.gatherUsageStats to False.

You can now view your Streamlit app in your browser.

Network URL: <http://172.17.0.4:8501>
External URL: <http://103.238.106.204:8501>