1. Create docker network

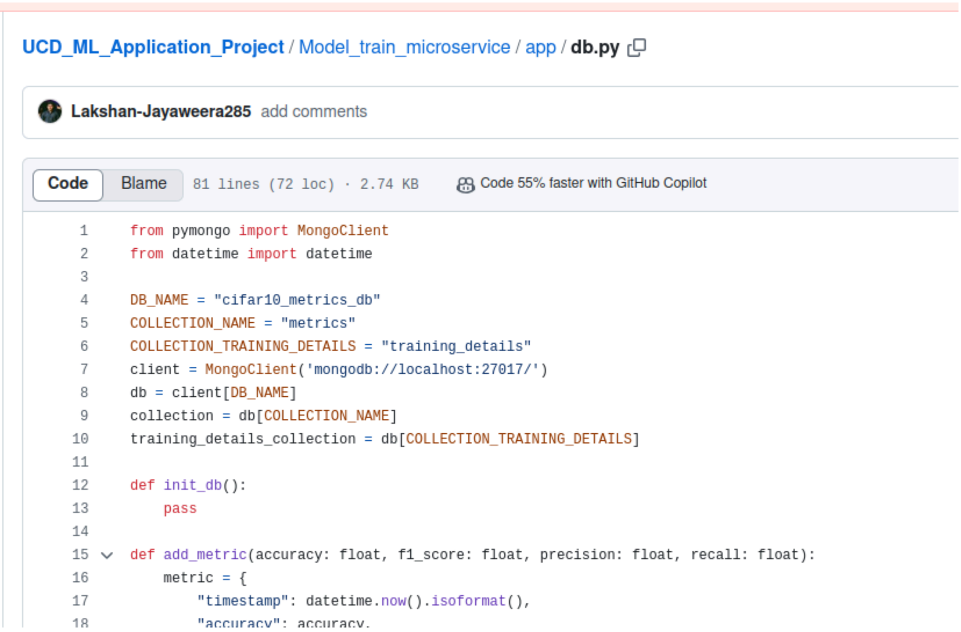
- docker network create cifar10-network

2. MongoDB docker container

- docker pull mongo
- docker run -d --name mongodb -p 27017:27017 --network cifar10-network mongo

3. Backend Service

- Go to the /UCD_ML_Application_Project/Model_train_microservice directory available in the backend Dockerfile.
- docker build -t cifar-backend-service .
- docker run -d --name cifar-backend-service -p 8000:8000 --network cifar10-network cifar-backend-service



UCD_ML_Application_Project / Model_train_microservice / app / db.py

Lakshan-Jayaweera285 add comments

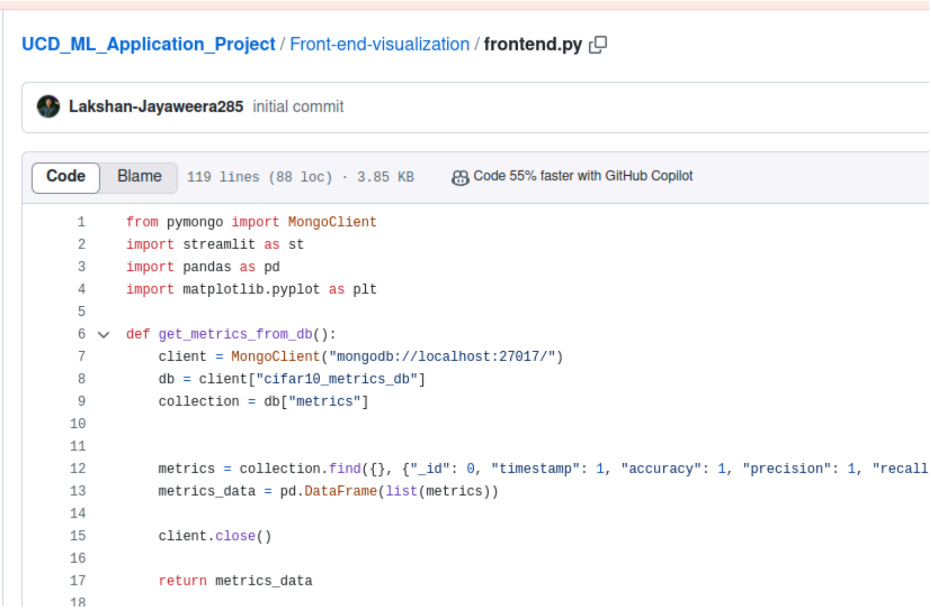
81 lines (72 loc) · 2.74 KB

```python
from pymongo import MongoClient
from datetime import datetime

DB_NAME = "cifar10_metrics_db"
COLLECTION_NAME = "metrics"
COLLECTION_TRAINING_DETAILS = "training_details"
client = MongoClient('mongodb://localhost:27017/')
db = client[DB_NAME]
collection = db[COLLECTION_NAME]
training_details_collection = db[COLLECTION_TRAINING_DETAILS]

def init_db():
    pass

def add_metric(accuracy: float, f1_score: float, precision: float, recall: float):
    metric = {
        "timestamp": datetime.now().isoformat(),
        "accuracy": accuracy,
```

- Change the source code in app/db.py mongo client to “mongodb://mongodb:27017”

4. Frontend Service

- Go to the /UCD_ML_Application_Project/Front-end-visualization/ directory available in the frontend Dockerfile.
- docker build -t cifar-frontend-service .
- docker run -d --name cifar-frontend-service -p 8501:8501 --network cifar10-network cifar-frontend-service



UCD_ML_Application_Project / Front-end-visualization / frontend.py

Lakshan-Jayaweera285 initial commit

Code
Blame
119 lines (88 loc) · 3.85 KB
Code 55% faster with GitHub Copilot

```python
from pymongo import MongoClient
import streamlit as st
import pandas as pd
import matplotlib.pyplot as plt

def get_metrics_from_db():
    client = MongoClient("mongodb://localhost:27017/")
    db = client["cifar10_metrics_db"]
    collection = db["metrics"]


    metrics = collection.find({}, {"_id": 0, "timestamp": 1, "accuracy": 1, "precision": 1, "recall
    metrics_data = pd.DataFrame(list(metrics))

    client.close()

    return metrics_data

```

- Change the source code in frontend.py mongo client to “mongodb://mongodb:27017”