**PE02: Programming Exercise**

**Instruction**

**Your task for PE02 is to:**

1. Finish the above implementation.
2. After completing step 5, what else do you think are needed for MLOps? Please provide a 50 to 100 words write-up on this question.

I think it can be necessary to set environment variables. It is a dynamic named value, containing an editable value and it could affect the program or services running on a computer/machine. It is made up of a name-value pair and set through a functionality built into the operating system or service. There is a convenient ways to set the default values of an environment variables inside of your Dockerfile, and get the value from a command-line argument when you’re building the image.

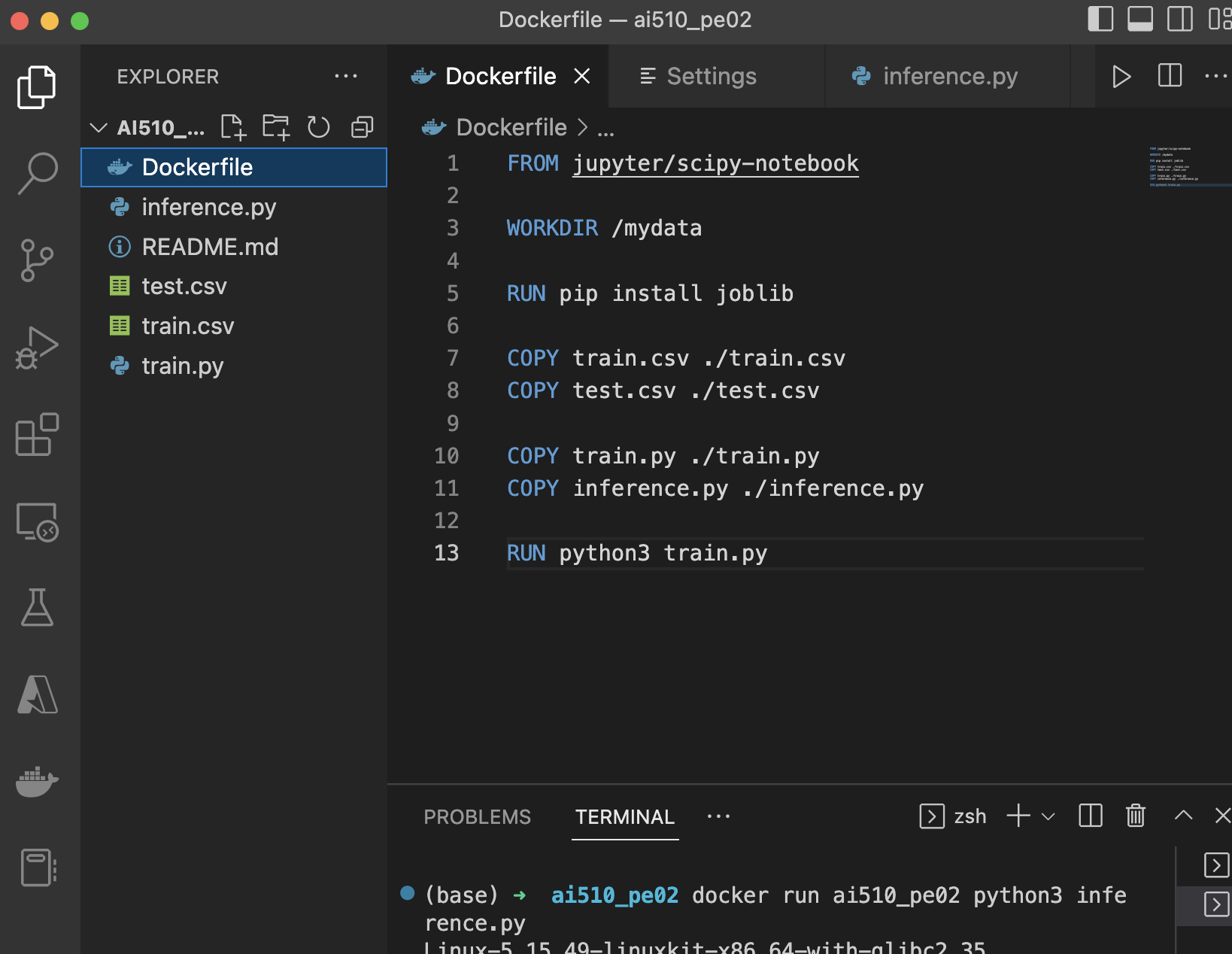
**Submit the items below to the PE submission page:**

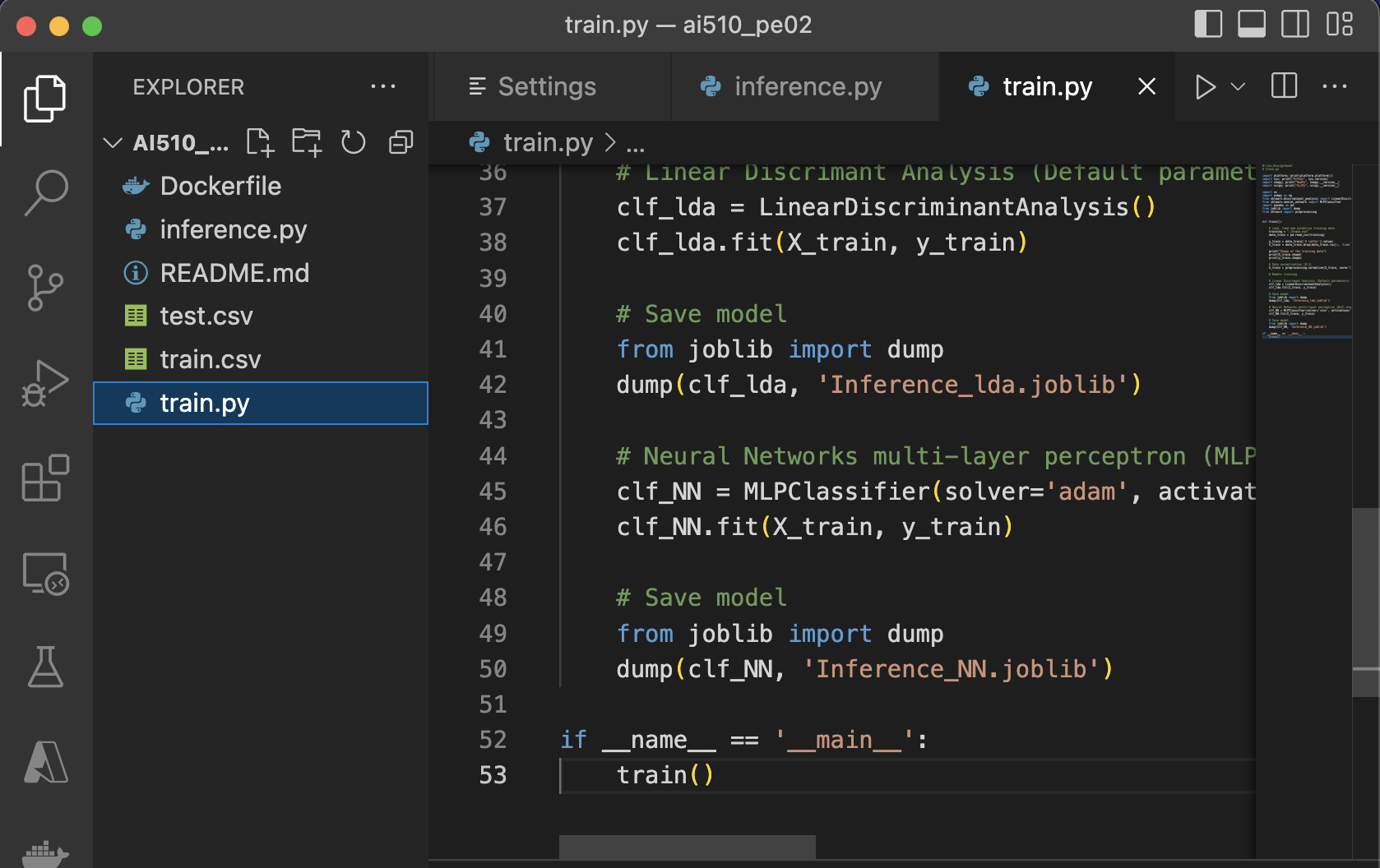
1. The GitHub link to store your implementation.
2. 50 to 100 words write-up for task 2.

For task 2, I consider three files Dockerfile, train.py, inference.py to start building a Docker container for a machine learning model. The train.py normalize data in a csv file (train.csv) and train two models to classify the data. The script saves two models: Linear Discriminant Analysis and Neural Networks multi-layer perceptron. The inference.py was to perform batch inference by loading the two models so that the application will normalize new data coming from a csv file (test.csv), perform inference on the dataset and print the classification accuracy and predictions.

1. Please provide screenshots after completing steps 2, 3, 4, and 5. Also, provide a 100 to 150 words overall analysis or feelings for setting up the ML model with docker.

The machine learning model is usually written in a single programming language such as python but the application will certainly need to interact with other applications written in different programming languages. Docker manages all these interactions as each microservice can be written in a different language allowing scalability and the easy addition or deletion of independent services. It’s just a way to create your own customized Docker image. This file contains step-by-step requirements as per our use case. Simply Dockerfile is a script on a recipe for creating a Docker image. It contains some. special keywords such as FROM, RUN, CMD, etc. Furthermore, The Dockerfile is dynamic in nature. It means at any point in time if you want to change any stop, update or add anything, you can just add & build. That’s quick & time-saving.





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Graphical user interface, text, application

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