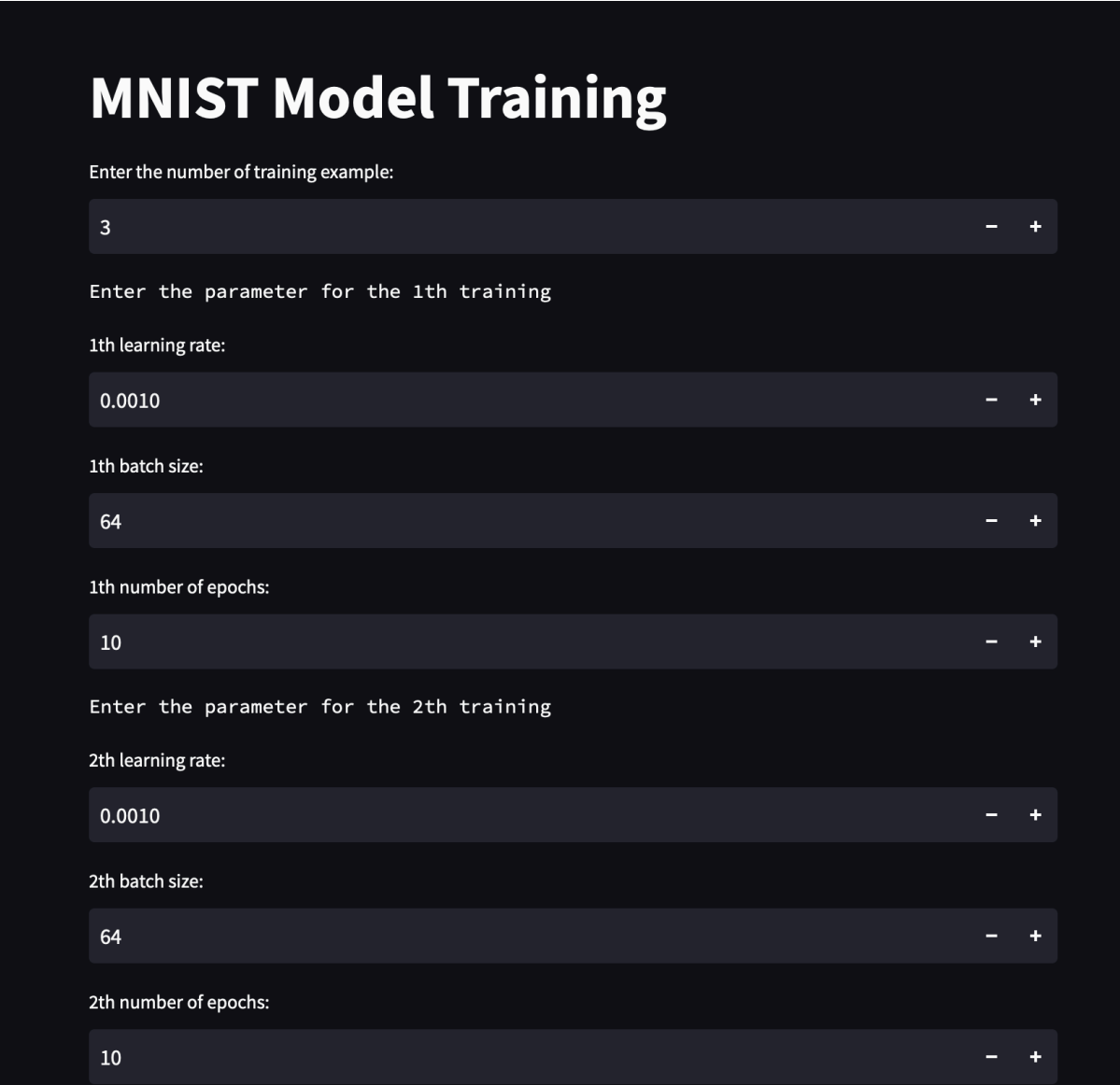


In my exercise, I have chosen one model from the internet. For a simple website to allow people to turn the parameter for this model, I have used the Streamlit. It is obvious to download the Streamlit and other libraries (such as stqmd, panda, for example), to run our code.

To start the code, please use the following command:
`streamlit run MNIST.py`

We will see in our simple web as in the following:



The screenshot shows a web application titled "MNIST Model Training" on a dark background. The interface includes several input fields for configuring training parameters. At the top, there's a title "MNIST Model Training" in large white font. Below it, the text "Enter the number of training example:" is followed by a numeric input field containing the value "3". This is followed by the text "Enter the parameter for the 1th training". Under this, there are three sub-parameters: "1th learning rate:" with a value of "0.0010", "1th batch size:" with a value of "64", and "1th number of epochs:" with a value of "10". These are followed by the text "Enter the parameter for the 2th training". Under this, there are three more sub-parameters: "2th learning rate:" with a value of "0.0010", "2th batch size:" with a value of "64", and "2th number of epochs:" with a value of "10". Each input field is a dark gray box with a white border and contains a white minus sign and a white plus sign on the right side, indicating a range or increment/decrement functionality.

MNIST Model Training

Enter the number of training example:

3

Enter the parameter for the 1th training

1th learning rate:

0.0010

1th batch size:

64

1th number of epochs:

10

Enter the parameter for the 2th training

2th learning rate:

0.0010

2th batch size:

64

2th number of epochs:

10

We can modify the number of training examples, which is a positive integer number. After this, we can modify the hyperparameter (including number of epochs, batch size, learning rate) for each training example.

After this, click "Start Training" to begin our training process

Enter the parameter for the 3th training

3th learning rate:

0.0010 - +

3th batch size:

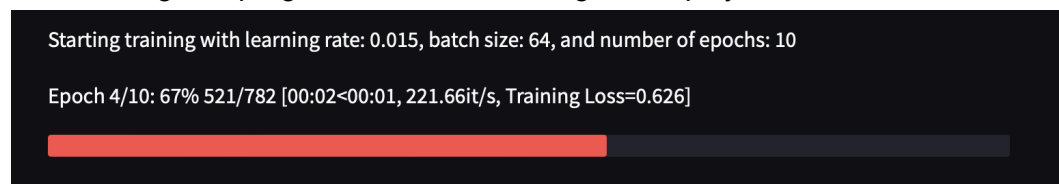
64 - +

3th number of epochs:

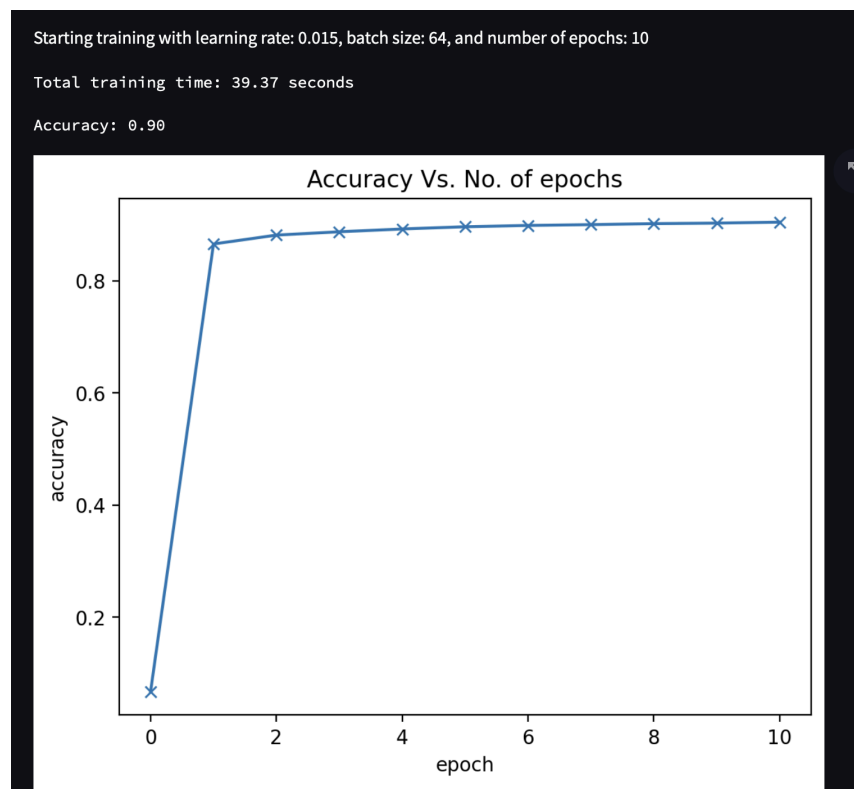
10 - +

Start Training

After starting, the progress bar of our training will display like this



The result of the training will display like this:



We can also click to "Show history" to see the training result in previous training.

Show History

Training History:

	Learning rate	Num	Training time (s)	Accuracy
0	0.0010	2	8.4553	0.7874
1	0.0100	1	4.1379	0.8616
2	0.0001	1	4.0117	0.8625
3	0.0010	10	39.5445	0.8543
4	0.0150	10	39.3748	0.9047