

[DLBasic] MLP Assignment

Edit

Click !

과제 노트북 링크 **FILL IN HERE**

이번 과제는 Multi-layer perceptron 을 사용한 MNIST classification을 구현해봅니다.
밑바닥부터 구현하는 것은 아니고 일부 빈칸만 채우시면 됩니다.

위에 과제 노트북 링크는 colab으로 연결됩니다.

지워진 부분을 찾아서 코드를 작성한 후 실행해보세요.

학습이 완료되면 약 0.977~0.980의 test accuracy를 확인하실 수 있습니다.

과제 완성 후 본 글의 **댓글**로 본인의 code가 포함된 link를 달아주세요.

Thumb up 0

주소 확인! 주소를 확인해보면 최성준 마스터님의 Github 주소로 되어있습니다!

The screenshot shows a Google Colab notebook interface with the following details:

- Title:** mlp.ipynb
- URL:** colab.research.google.com
- Section:** Multilayer Perceptron (MLP)
- Code:**

```
1 import numpy as np
2 import matplotlib.pyplot as plt
3 import torch
4 import torch.nn as nn
5 import torch.optim as optim
6 import torch.nn.functional as F
7 %matplotlib inline
8 %config InlineBackend.figure_format='retina'
9 print ("PyTorch version:%s"%(torch.__version__))
10 device = torch.device('cuda:0' if torch.cuda.is_available() else 'cpu')
11 print ("device:%s"%(device))
```
- Section:** Dataset
- Code:**

```
[ ] 1 from torchvision import datasets,transforms
2 mnist_train = datasets.MNIST(root='./data/',train=True,transform=transforms.ToTensor(),download=True)
3 mnist_test = datasets.MNIST(root='./data/',train=False,transform=transforms.ToTensor(),download=True)
4 print ("mnist_train:\n",mnist_train,"\n")
5 print ("mnist_test:\n",mnist_test,"\n")
6 print ("Done.")
```
- Section:** Data Iterator
- Code:**

```
[ ] 1 BATCH_SIZE = 256
```

colab.research.google.com

mlp.ipynb

File Edit View Insert Runtime Tools Help

View on GitHub

New notebook

Open notebook ⌘/Ctrl+O

Upload notebook

Rename notebook

Move to trash

Save a copy in Drive

Save a copy as a GitHub Gist

Save a copy in GitHub

Save ⌘/Ctrl+S

Save and pin revision ⌘/Ctrl+M S

Revision history

Download .ipynb

Download .py

Update Drive preview

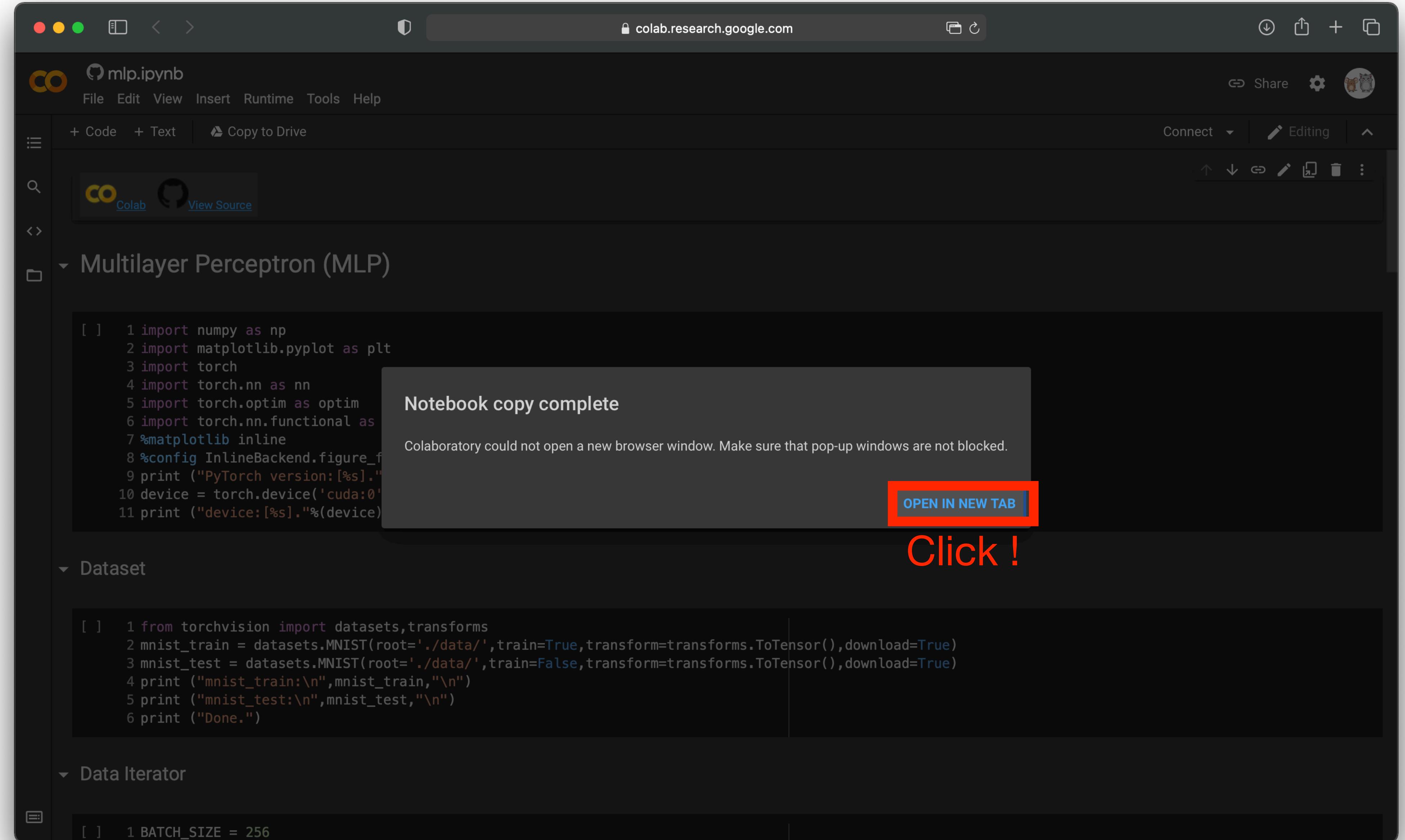
Print ⌘/Ctrl+P

Click !)

```
[ ] 1 from torchvision import datasets,transforms  
2 mnist_train = datasets.MNIST(root='./data/',train=True,transform=transforms.ToTensor(),download=True)  
3 mnist_test = datasets.MNIST(root='./data/',train=False,transform=transforms.ToTensor(),download=True)  
4 print ("mnist_train:\n",mnist_train,"\n")  
5 print ("mnist_test:\n",mnist_test,"\n")  
6 print ("Done.")
```

Data Iterator

```
[ ] 1 BATCH_SIZE = 256
```



mlp.ipynb

File Edit View Insert Runtime Tools Help

+ Code + Text Copy to Drive

Colab View Source

Multilayer Perceptron (MLP)

```
[ ] 1 import numpy as np  
2 import matplotlib.pyplot as plt  
3 import torch  
4 import torch.nn as nn  
5 import torch.optim as optim  
6 import torch.nn.functional as F  
7 %matplotlib inline  
8 %config InlineBackend.figure_format='retina'  
9 print ("PyTorch version:%s."%torch.__version__)  
10 device = torch.device('cuda:0'  
11 print ("device:%s.%s"%(device,device.type))
```

Notebook copy complete

Colaboratory could not open a new browser window. Make sure that pop-up windows are not blocked.

OPEN IN NEW TAB

Dataset

```
[ ] 1 from torchvision import datasets,transforms  
2 mnist_train = datasets.MNIST(root='./data/',train=True,transform=transforms.ToTensor(),download=True)  
3 mnist_test = datasets.MNIST(root='./data/',train=False,transform=transforms.ToTensor(),download=True)  
4 print ("mnist_train:\n",mnist_train,"\n")  
5 print ("mnist_test:\n",mnist_test,"\n")  
6 print ("Done.")
```

Data Iterator

```
[ ] 1 BATCH_SIZE = 256
```

Click !

colab.research.google.com

mlp.ipynb - Colaboratory

Copy of mlp.ipynb - Colaboratory

Copy of mlp.ipynb

복사본 생성 확인!

Comment Share Settings

File Edit view Insert Runtime Tools Help Last saved at 12:38 AM

+ Code + Text Connect Editing

Colab View Source

Multilayer Perceptron (MLP)

```
1 import numpy as np
2 import matplotlib.pyplot as plt
3 import torch
4 import torch.nn as nn
5 import torch.optim as optim
6 import torch.nn.functional as F
7 %matplotlib inline
8 %config InlineBackend.figure_format='retina'
9 print ("PyTorch version:[%s].%(torch.__version__)")
10 device = torch.device('cuda:0' if torch.cuda.is_available() else 'cpu')
11 print ("device:[%s].%(device)")
```

Dataset

```
[ ] 1 from torchvision import datasets,transforms
2 mnist_train = datasets.MNIST(root='./data/',train=True,transform=transforms.ToTensor(),download=True)
3 mnist_test = datasets.MNIST(root='./data/',train=False,transform=transforms.ToTensor(),download=True)
4 print ("mnist_train:\n",mnist_train,"\n")
5 print ("mnist_test:\n",mnist_test,"\n")
6 print ("Done.")
```

Data Iterator

주소 확인! 새로운 주소인지 확인해주세요!

The screenshot shows a Google Colab notebook interface. The title bar indicates the URL is colab.research.google.com. The notebook is titled "Copy of mlp.ipynb". The code editor contains two sections: "Multilayer Perceptron (MLP)" and "Dataset".

Multilayer Perceptron (MLP)

```
1 import numpy as np
2 import matplotlib.pyplot as plt
3 import torch
4 import torch.nn as nn
5 import torch.optim as optim
6 import torch.nn.functional as F
7 %matplotlib inline
8 %config InlineBackend.figure_format='retina'
9 print ("PyTorch version:[%s].%(torch.__version__)")
10 device = torch.device('cuda:0' if torch.cuda.is_available() else 'cpu')
11 print ("device:[%s].%(device)")
```

Dataset

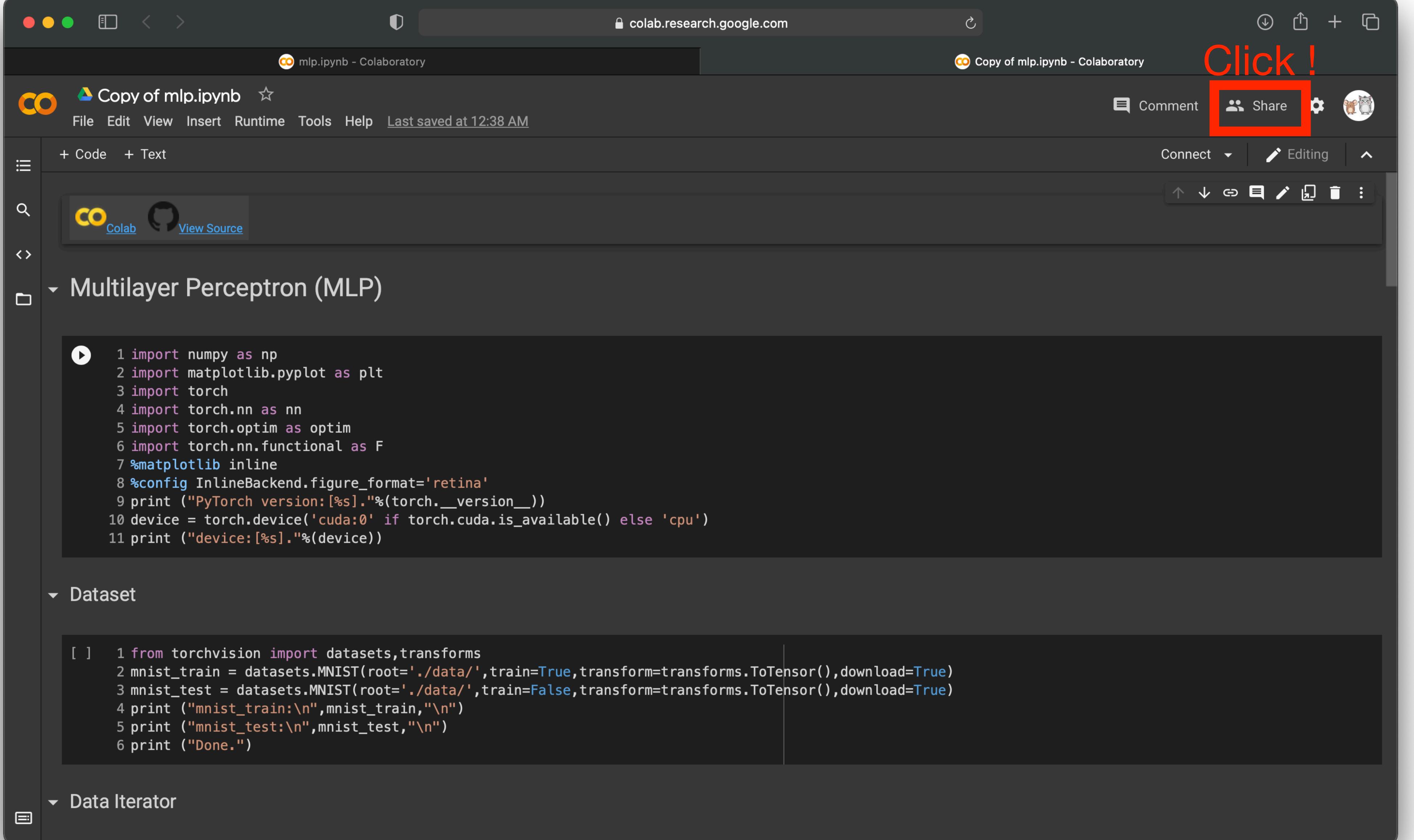
```
[ ] 1 from torchvision import datasets,transforms
2 mnist_train = datasets.MNIST(root='./data/',train=True,transform=transforms.ToTensor(),download=True)
3 mnist_test = datasets.MNIST(root='./data/',train=False,transform=transforms.ToTensor(),download=True)
4 print ("mnist_train:\n",mnist_train,"\n")
5 print ("mnist_test:\n",mnist_test,"\n")
6 print ("Done.")
```

Data Iterator

자....이제....

Coding.... Coding....

**Coding 끝!
과제 제출 해야죠!**



Click !

Copy of mlp.ipynb - Colaboratory

File Edit View Insert Runtime Tools Help Last saved at 12:38 AM

Comment Share

+ Code + Text Connect Editing

Colab View Source

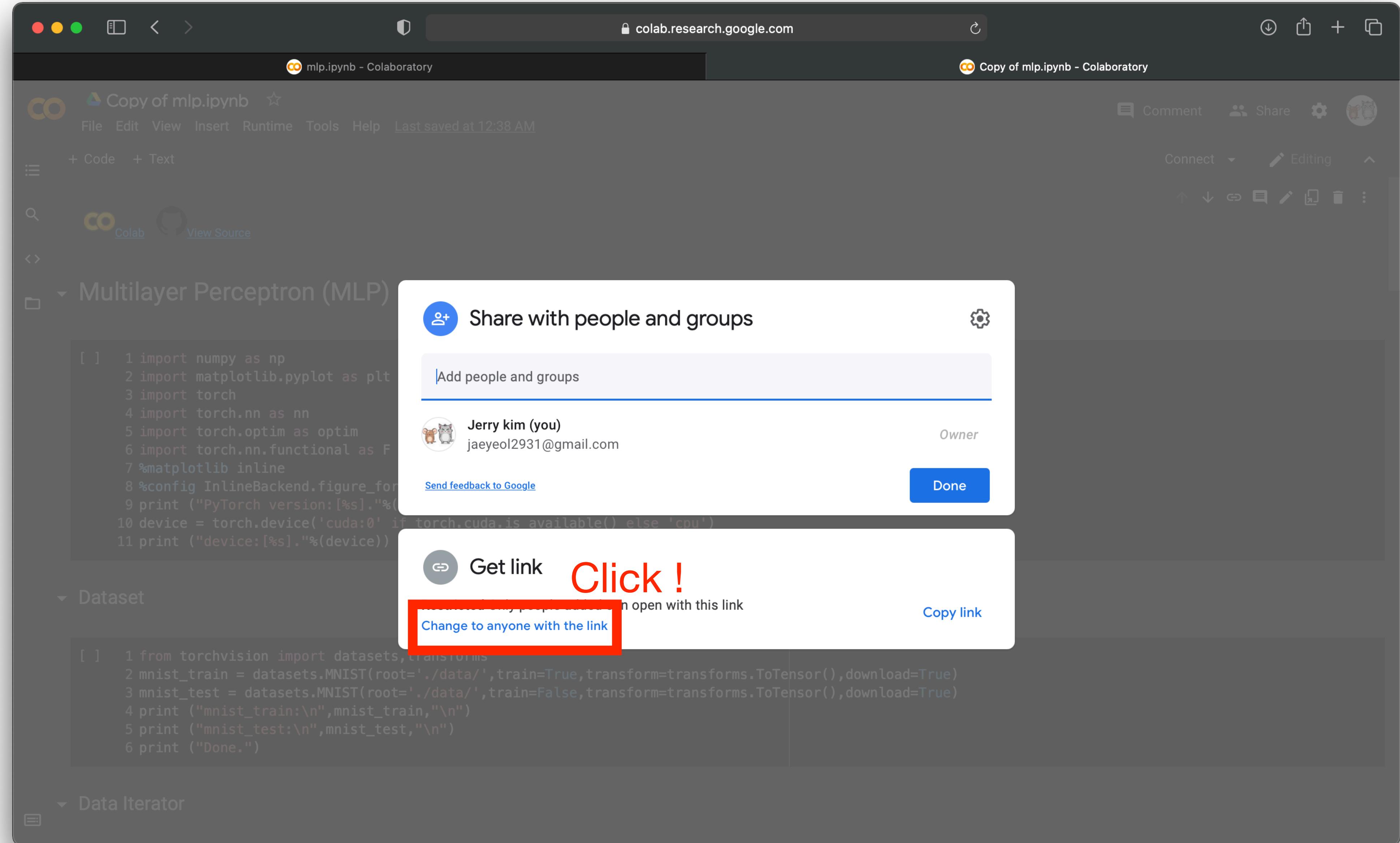
Multilayer Perceptron (MLP)

```
1 import numpy as np
2 import matplotlib.pyplot as plt
3 import torch
4 import torch.nn as nn
5 import torch.optim as optim
6 import torch.nn.functional as F
7 %matplotlib inline
8 %config InlineBackend.figure_format='retina'
9 print ("PyTorch version:%s.%s(%s)" % (torch.__version__))
10 device = torch.device('cuda:0' if torch.cuda.is_available() else 'cpu')
11 print ("device:%s.%s(%s)" % (device))
```

Dataset

```
[ ] 1 from torchvision import datasets,transforms
2 mnist_train = datasets.MNIST(root='./data/',train=True,transform=transforms.ToTensor(),download=True)
3 mnist_test = datasets.MNIST(root='./data/',train=False,transform=transforms.ToTensor(),download=True)
4 print ("mnist_train:\n",mnist_train,"\n")
5 print ("mnist_test:\n",mnist_test,"\n")
6 print ("Done.")
```

Data Iterator



A screenshot of a Google Colab notebook titled "Copy of mlp.ipynb - Colaboratory". The notebook contains code for a Multilayer Perceptron (MLP) and a dataset. A sharing dialog box is overlaid on the screen, prompting the user to "Share with people and groups". The dialog includes a "Get link" section with a red box highlighting the "Copy link" button, which is currently active and shows a partially visible URL. The dialog also shows sharing settings for "Anyone with the link" and "Viewer" access.

File Edit View Insert Runtime Tools Help Last saved at 12:38 AM

+ Code + Text

Comment Share

Connect Editing

Colab View Source

Multilayer Perceptron (MLP)

```
[ ] 1 import numpy as np
2 import matplotlib.pyplot as plt
3 import torch
4 import torch.nn as nn
5 import torch.optim as optim
6 import torch.nn.functional as F
7 %matplotlib inline
8 %config InlineBackend.figure_format='retina'
9 print ("PyTorch version: [%s].%s" % (torch.__version__, torch._version__))
10 device = torch.device('cuda:0' if torch.cuda.is_available() else 'cpu')
11 print ("device:[%s].%s(%s)" % (device, device.type, device))

Dataset
```

```
[ ] 1 from torchvision import datasets
2 mnist_train = datasets.MNIST(root='./data/', train=True, transform=transforms.ToTensor(), download=True)
3 mnist_test = datasets.MNIST(root='./data/', train=False, transform=transforms.ToTensor(), download=True)
4 print ("mnist_train:\n", mnist_train, "\n")
5 print ("mnist_test:\n", mnist_test, "\n")
6 print ("Done.")

Data Iterator
```

Share with people and groups

No one has been added yet

Get link

Click !

https://colab.research.google.com/drive/1Cp9KYfgDzVjIPH4895hz0eS... Copy link

Anyone with the link

Viewer

Viewers of this file can see comments and suggestions

Send feedback to Google Done

edwith.org

mlp.ipynb - Colaboratory | Copy of mlp.ipynb - Colaboratory | 부스트캠프 - AI Tech > [DLBasic] MLP Assignment : edwith

PROJECT | 심화
부스트캠프 - AI Tech

네이버 커넥트재단
부스트캠프 AI Tech

Thumb up 877 | Learner 257
Course management

공지 게시판
질문 게시판
학습 정리
피어세션 게시판
zoom 회의실 목록

[예시-Stage] Week 00
[U]Week1(Python)
[U]Week2(AIMath)
[U]Week3(DLBasic)

[DAY 11] 딥러닝 기초
[DLBasic] Week3 Overview
[AI Math 8강] 베이지스 토계학 마보기

[DLBasic] MLP Assignment

Edit

과제 노트북 링크: FILL IN HERE

이번 과제는 Multi-layer perceptron을 사용한 MNIST classification을 구현해봅니다.
밑바닥부터 구현하는 것은 아니고 일부 빈칸만 채우시면 됩니다.
위에 과제 노트북 링크는 colab으로 연결됩니다.
지워진 부분을 찾아서 코드를 작성한 후 실행해보세요.
학습이 완료되면 약 0.977~0.980의 test accuracy를 확인하실 수 있습니다.

과제 완성 후 본 글의 **댓글**로 본인의 code가 포함된 link를 달아주세요.

Thumb up 0

Comments | 연관 토론

https://colab.research.google.com/drive/1Cp9KYfgDzVjlPH4895hzOeT6eScRhUlj?usp=sharing

저장

주소 적어서 저장!

**과제 끝!
수고하셨습니다!**