Testing_trainScript_testScript

October 27, 2022

1 Module 07: Testing train.py and test.py

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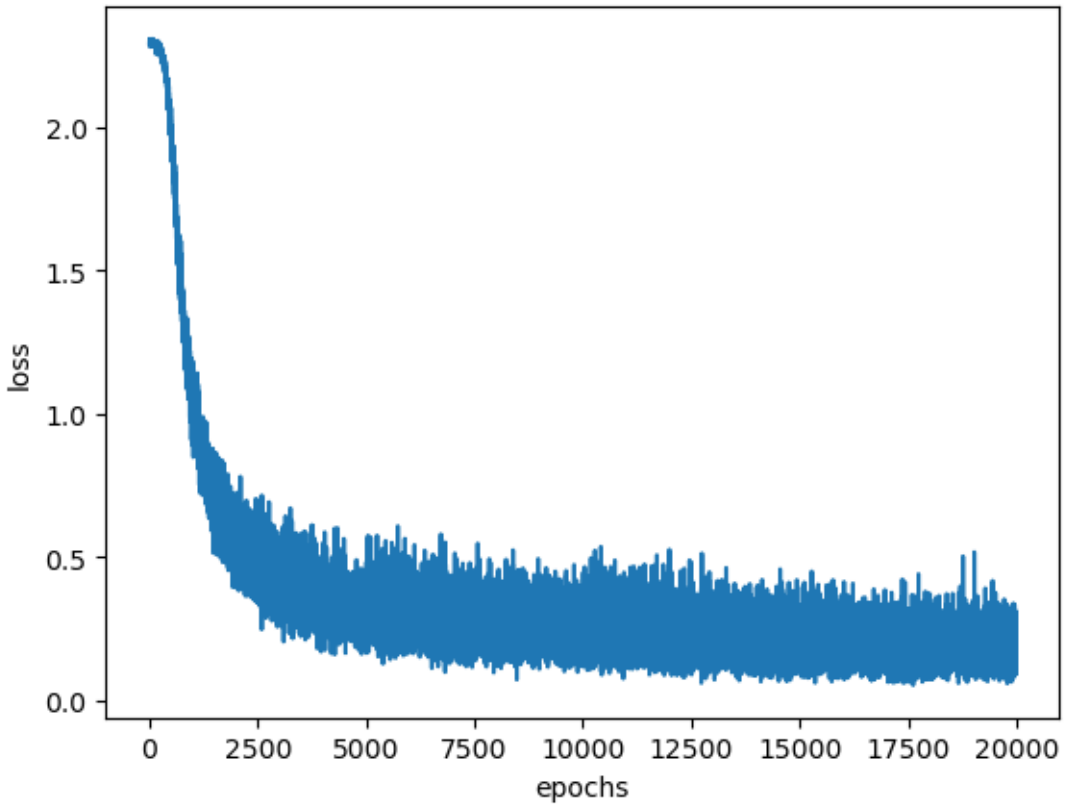
1.1.1 train.py is the script which is used for training the Two Layer Neural Network on the MNIST dataset.

[23]:
```
# !python train.py
```

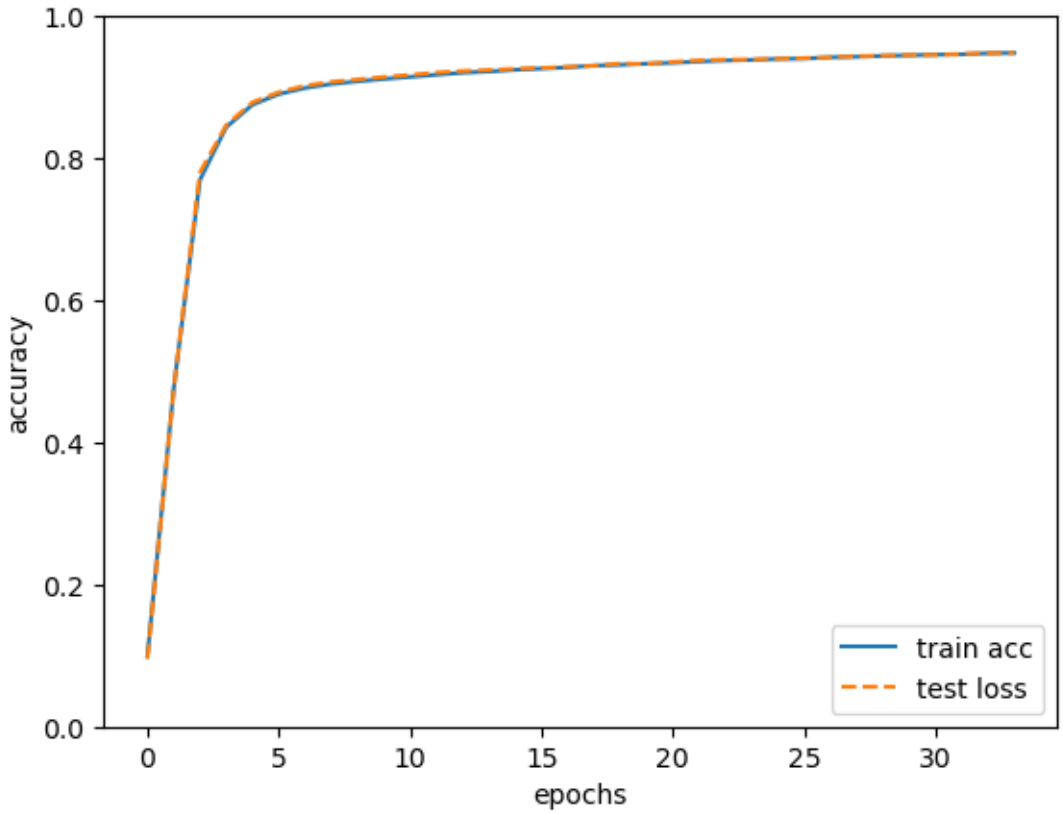
```
Start Training…
100%|                    | 10000/10000 [01:21<00:00, 122.55it/s]
Training Completed!!
Model Saved!!
Figure(640x480)
Figure(640x480)
Figure(640x480)
Figure(640x480)
```

[36]:
```
%run train.py
```

```
Start Training…
100%|                    | 20000/20000 [01:14<00:00, 268.44it/s]
Training Completed!!
Model Saved!!
```




```
<Figure size 640x480 with 0 Axes>
```




```
<Figure size 640x480 with 0 Axes>
```

1.1.2 test.py is the script which is used for testing on our own handwritten digits datasets.

Note: The handwritten digits are stored in the '../TestImages/' folder which is 1 level before in the folder structure than my script.

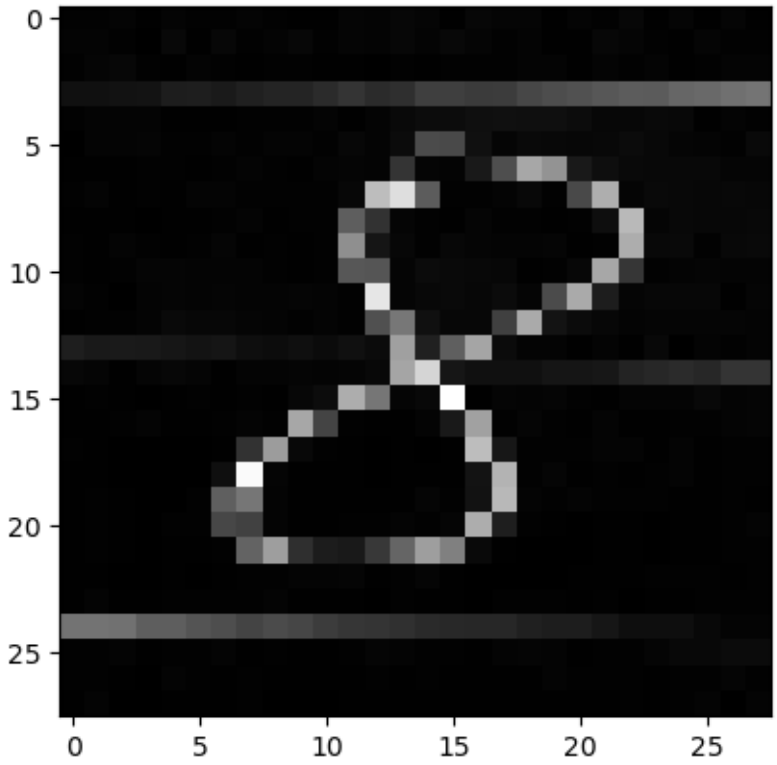
[7]:
```
!python test.py 8_4.png 8
```

```
Model Loaded!!
Figure(640x480)
Image 8_4.png is for digit 8 is recognized as 8
```

below command is used to display the image in the output

[40]:
```
%run test.py 8_4.png 8
```

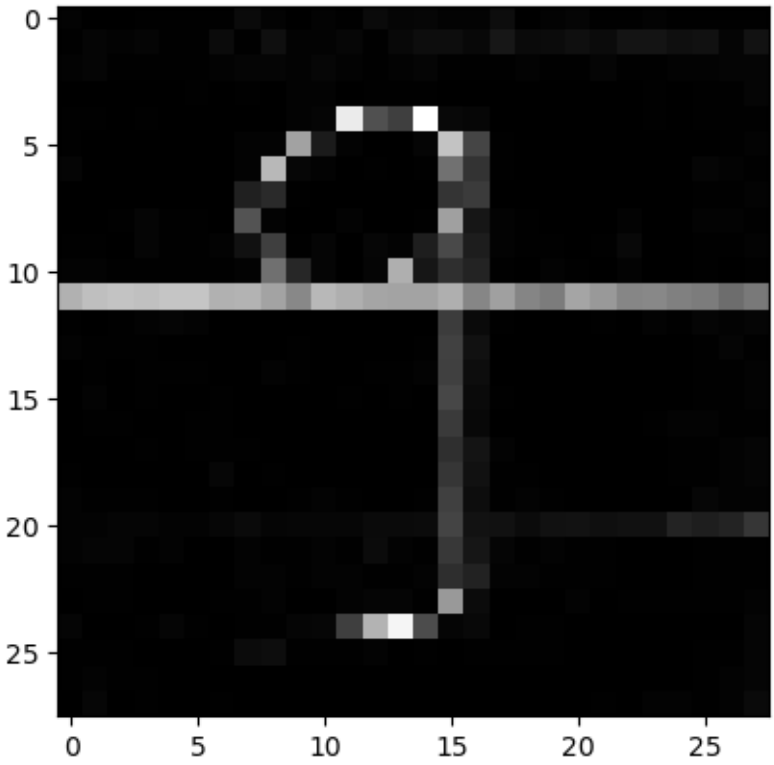
```
Model Loaded!!
8
```




```
<Figure size 640x480 with 0 Axes>
```

[28]:
```
%run test.py 9_2.png 9
```

```
Model Loaded!!
Image 9_2.png is for digit 9 but the inference result is 3
```




```
<Figure size 640x480 with 0 Axes>
```

[54]:
```
import glob
import matplotlib.pyplot as plt

rows = 9
columns = 8
i = 1
fig = plt.figure(figsize=(20,17))

%cd /home/nilakshi/Documents/NBP/Fall2022/ECE_5831/TestImages
#!pwd

file_names = []
#for imageName in glob.glob('../TestImages/*.png'):
for imageName in glob.glob('*.png'):
    file_names.append(imageName)

%cd /home/nilakshi/Documents/NBP/Fall2022/ECE_5831/module06
#!pwd

import matplotlib as mpl
```

```
mpl.rc('figure', max_open_warning = 0)

for name in file_names:
    #print(name)
    fig.add_subplot(rows, columns, i)
    #print(i)
    %run 'test.py' $name
    #fig.add_subplot(rows, columns, i)
    i += 1
    fig.tight_layout()
    plt.title('{}={}'.format(name,predicted_num))
```

```
/home/nilakshi/Documents/NBP/Fall2022/ECE_5831/TestImages
/home/nilakshi/Documents/NBP/Fall2022/ECE_5831/module06
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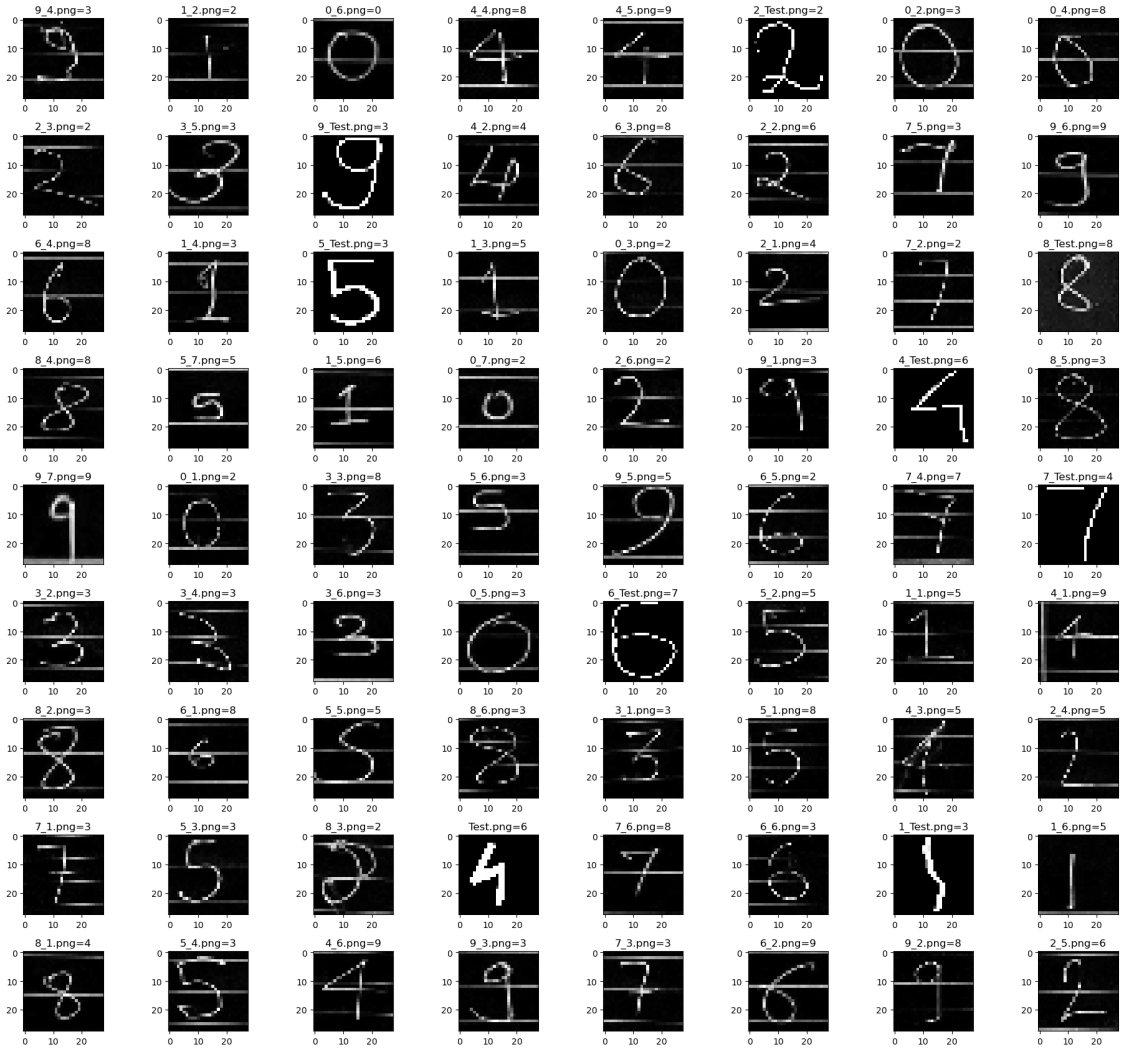
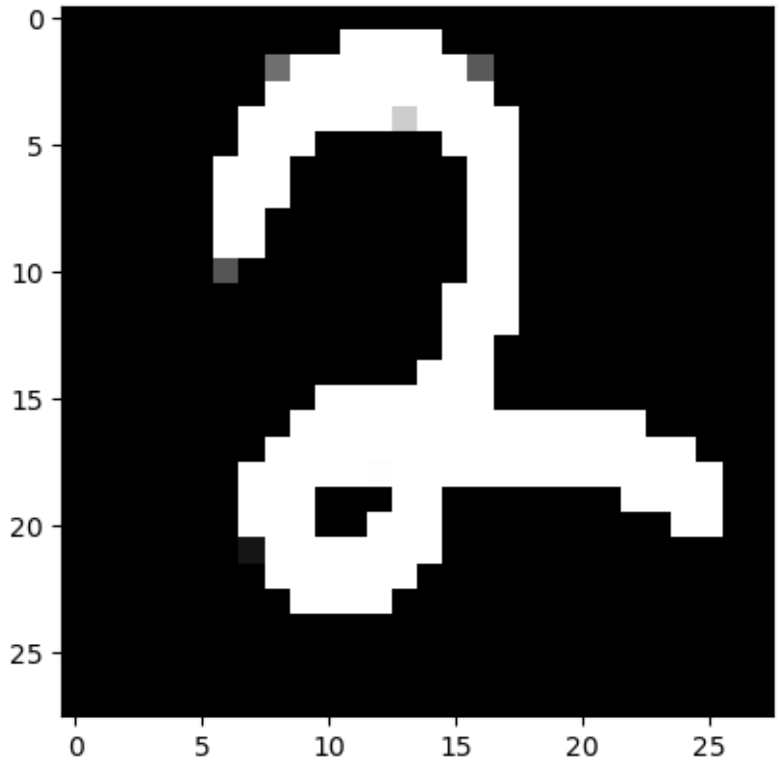


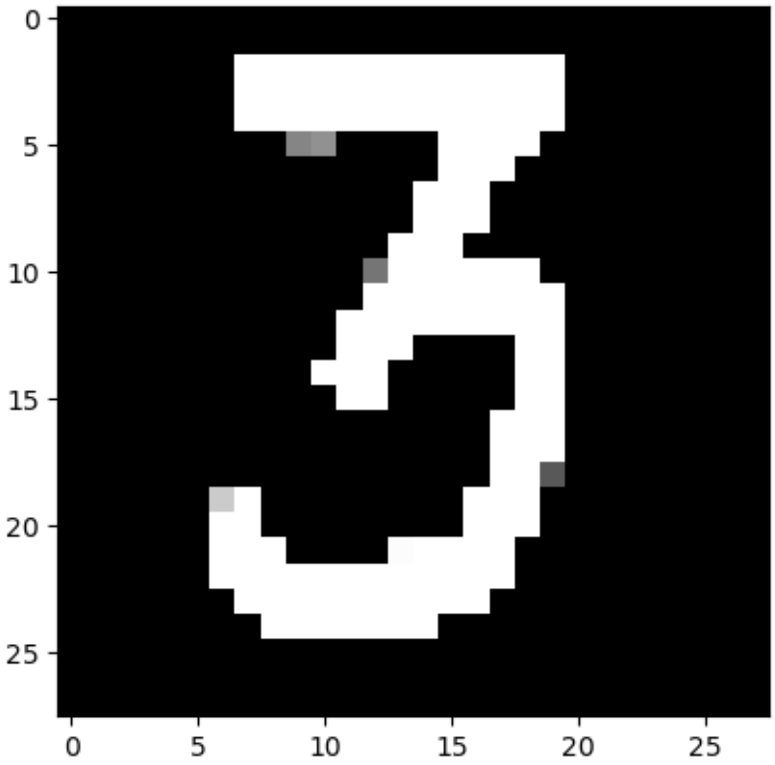
[46]:
```
%run test.py Test.png 2
```

```
Model Loaded!!
Image Test.png is for digit 2 is recognized as 2
```



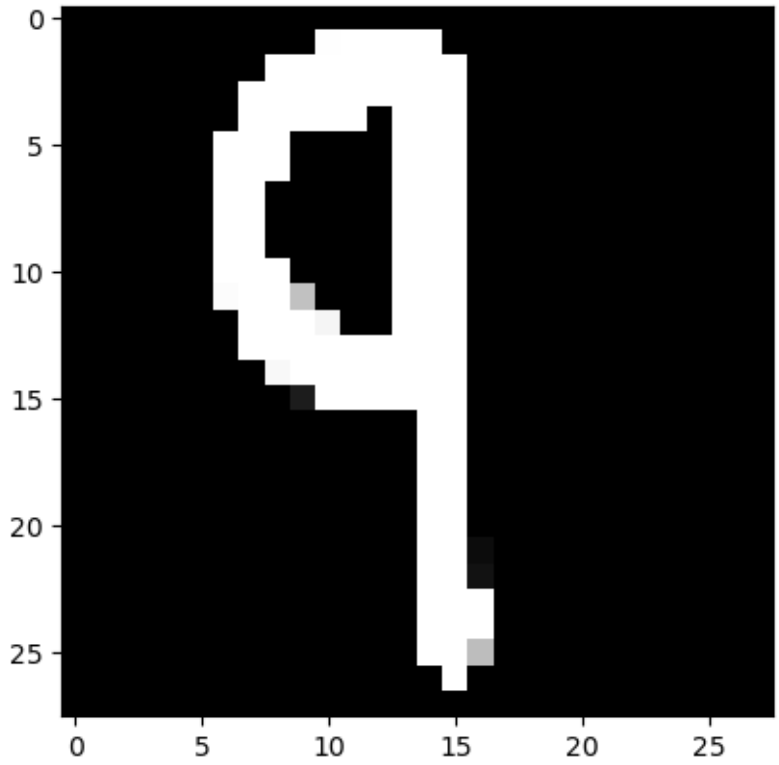
[47]:
```
%run test.py Test.png 3
```

```
Model Loaded!!
Image Test.png is for digit 3 is recognized as 3
```



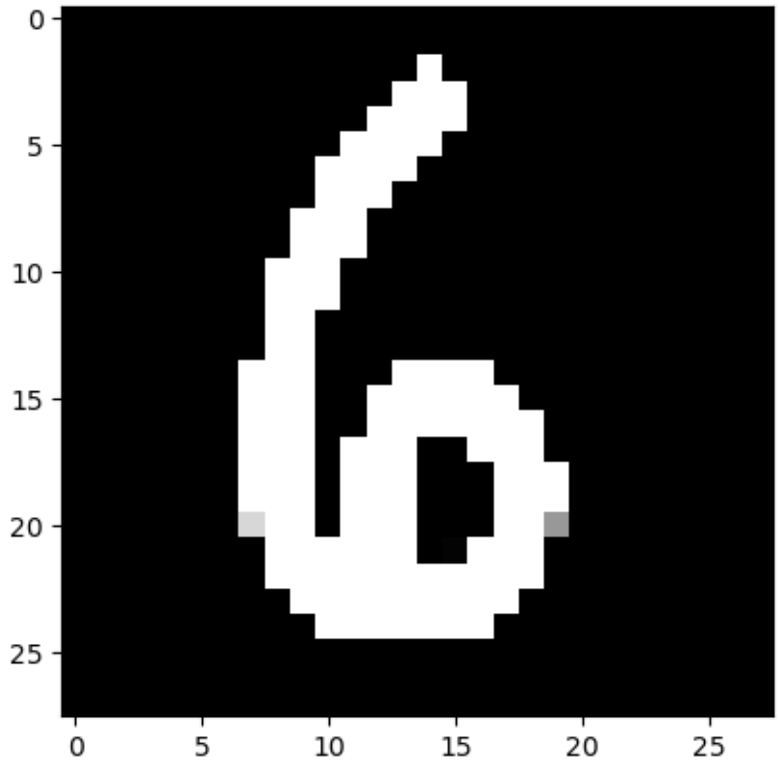
[48]:
```
%run test.py Test.png 9
```

```
Model Loaded!!
Image Test.png is for digit 9 but the inference result is 8
```



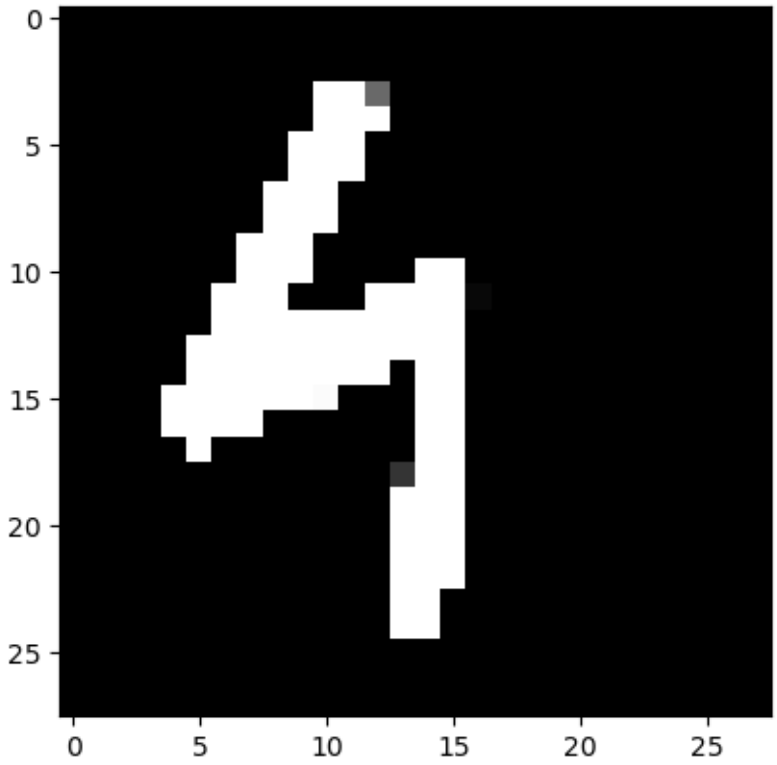
[49]:
```
%run test.py Test.png 6
```

```
Model Loaded!!
Image Test.png is for digit 6 but the inference result is 2
```



[51]:
```
%run test.py Test.png 4
```

```
Model Loaded!!
Image Test.png is for digit 4 is recognized as 4
```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[ ]: