Week3_ImportData

October 9, 2020

1 Week 3 Import Data

- Edited by LUXP
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1.1 Read in data from TXT file

[1]:
```
FileName = 'cars.txt'
fid = open(FileName, 'r');
print(fid.read())
fid.close()
```

```
Call me Ishmael. Some years ago--never mind how long precisely--having
    little or no money in my purse, and nothing particular to interest me on
    shore, I thought I would sail about a little and see the watery part of
    the world. It is a way I have of driving off the spleen and regulating
    the circulation. Whenever I find myself growing grim about the mouth;
    whenever it is a damp, drizzly November in my soul;
```

1.2 Read file using iter

[2]:
```
FileName = 'cars.txt'
fid = open(FileName, 'r');
get_line = iter(fid)
print(next(get_line), end="")
print(next(get_line), end="")

print('-'*50)
for line in iter(fid):
    print(line, end="")
```

```
Call me Ishmael. Some years ago--never mind how long precisely--having
    little or no money in my purse, and nothing particular to interest me on
--------------------------------------------------
    shore, I thought I would sail about a little and see the watery part of
```

```
the world. It is a way I have of driving off the spleen and regulating
the circulation. Whenever I find myself growing grim about the mouth;
whenever it is a damp, drizzly November in my soul;
```

1.2.1 with open(filename, 'r') as fid:

[3]:
```
with open(FileName, 'r') as fid:
    print(fid.readline())
    print(fid.readline())
```

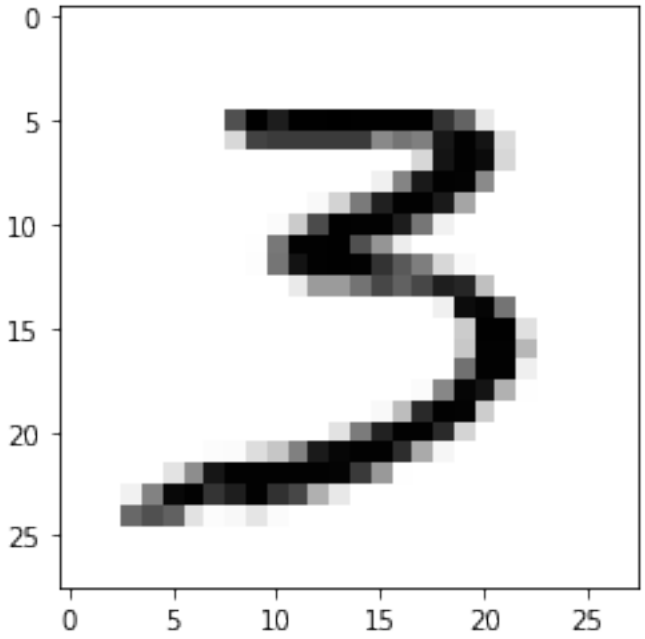
```
Call me Ishmael. Some years ago--never mind how long precisely--having

    little or no money in my purse, and nothing particular to interest me on
```

1.3 Numpy for reading csv file

ref: data = np.loadtxt(filename, delimiter='\t', skiprows=1, usecols=[0,2], dtype=float)

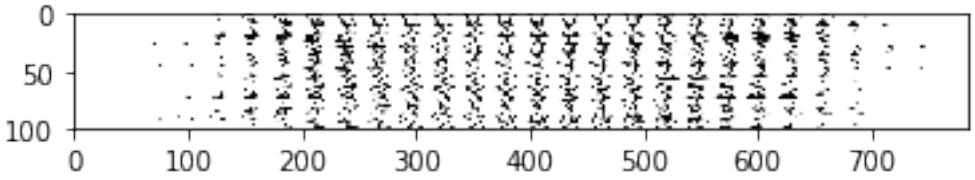
[3]:
```
import numpy as np
import matplotlib.pyplot as plt
file = 'digits.csv'

digits = np.loadtxt(file, delimiter=',')
print(type(digits))

# Select and reshape a row
im = digits[25, 1:]
im_sq = np.reshape(im, (28, 28))

# Plot reshaped data (matplotlib.pyplot already loaded as plt)
plt.imshow(im_sq, cmap='Greys', interpolation='nearest')
plt.show()
```

```
<class 'numpy.ndarray'>
```



[6]:
```
Matrix = np.mat(digits)
print(np.shape(Matrix))
plt.imshow(Matrix, cmap='Greys', interpolation='nearest')
plt.show()
```

```
(100, 785)
```



[ ]:
```

```