

```
In [1]: import numpy as np
```

```
In [2]: # Load data from file
filedata = np.genfromtxt('data.txt', delimiter=',')
filedata = filedata.astype('int32')
filedata
```

```
Out[2]: array([[ 1, 13, 21, 11, 196, 75, 4, 3, 34, 6, 7, 8, 0,
                1, 2, 3, 4, 5],
               [ 3, 42, 12, 33, 766, 75, 4, 55, 6, 4, 3, 4, 5,
                6, 7, 0, 11, 12],
               [ 1, 22, 33, 11, 999, 11, 2, 1, 78, 0, 1, 2, 9,
                8, 7, 1, 76, 88]], dtype=int32)
```

```
In [3]: # Boolean Masking and Advanced Indexing
```

```
In [4]: filedata > 50
```

```
Out[4]: array([[False, False, False, False, True, True, False, False, False,
                False, False, False, False, False, False],
               [False, False, False, False, True, True, False, True, False,
                False, False, False, False, False, False],
               [False, False, False, False, True, False, False, False, True,
                False, False, False, False, False, True]])
```

```
In [5]: # You can index with a list in NumPy
a = np.array([1,2,3,4,5,6,7,8,9])
a[[1,2,8]]
```

```
Out[5]: array([2, 3, 9])
```

```
In [6]: filedata[filedata > 50]
```

```
Out[6]: array([196, 75, 766, 75, 55, 999, 78, 76, 88], dtype=int32)
```

The `numpy.all()` function tests whether all array elements along the mentioned axis evaluate to True.

```
In [7]: np.all(filedata > 50, axis=1)
```

```
Out[7]: array([False, False, False])
```

```
In [8]: ((filedata > 50) & (filedata < 100))
```

```
Out[8]: array([[False, False, False, False, False, True, False, False, False,
                False, False, False, False, False, False],
               [False, False, False, False, False, True, False, True, False,
                False, False, False, False, False, False],
               [False, False, False, False, False, False, False, False, True,
                False, False, False, False, False, True]])
```

```
In [9]: filedata[((filedata > 50) & (filedata < 100))]
```

```
Out[9]: array([75, 75, 55, 78, 76, 88], dtype=int32)
```