

mt1_analytics

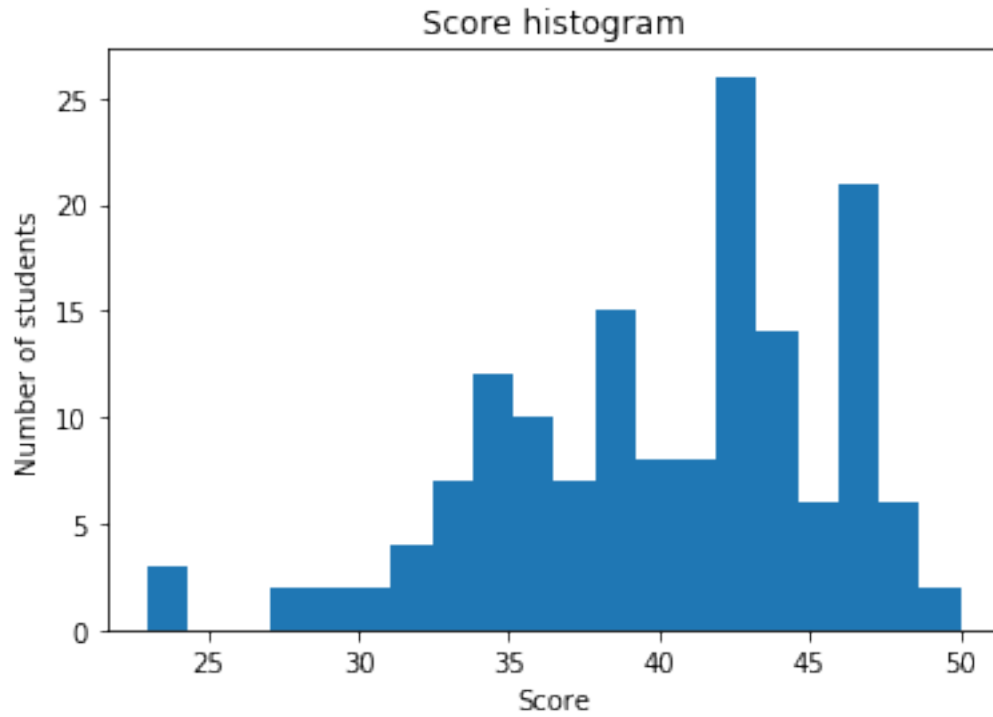
March 6, 2018

```
In [10]: import matplotlib.pyplot as plt
import numpy as np
from scipy.stats import gaussian_kde
from scipy.stats import mode
%matplotlib inline
```

```
In [11]: f = open('./scores.csv').readlines()
x = []
for line in f:
    try:
        x.append(int(line))
    except Exception:
        pass
```

```
In [12]: n,s,_ = plt.hist(x,bins=20)
plt.xlabel('Score')
plt.ylabel('Number of students')
plt.title('Score histogram')
```

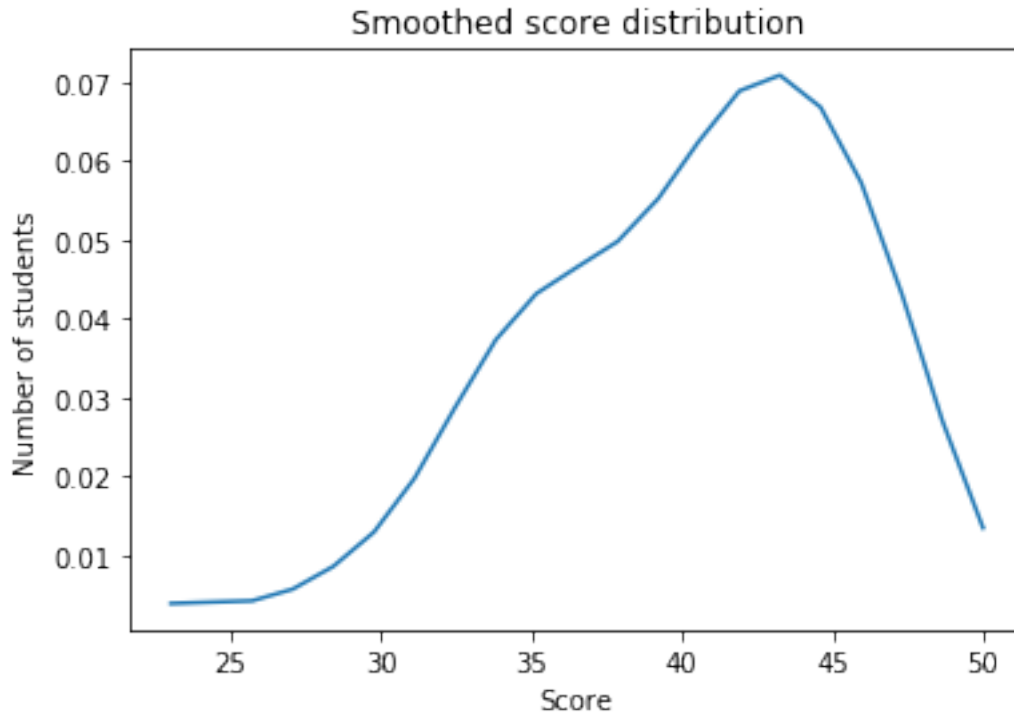
```
Out[12]: Text(0.5,1,'Score histogram')
```



```
In [13]: density = gaussian_kde(x)
```

```
In [14]: plt.plot(s,density(s))  
plt.xlabel('Score')  
plt.ylabel('Number of students')  
plt.title('Smoothed score distribution')
```

```
Out[14]: Text(0.5,1,'Smoothed score distribution')
```



```
In [15]: print("Mean = %0.2f\nStDev = %0.2f\nMedian = %0.2f\nMode = %0.2f" %  
              (np.mean(x), np.std(x), np.median(x), mode(x)[0]))
```

```
Mean = 40.12  
StDev = 5.52  
Median = 41.00  
Mode = 42.00
```