# exercise_06_differences

August 12, 2021

## 1 Exercise 06 - plotting differences

**Task**: Plot the difference between the average inflammation (averaging over the patients!) of the first inflammation dataset (first file) and the average of the second dataset (second file).

Hints:

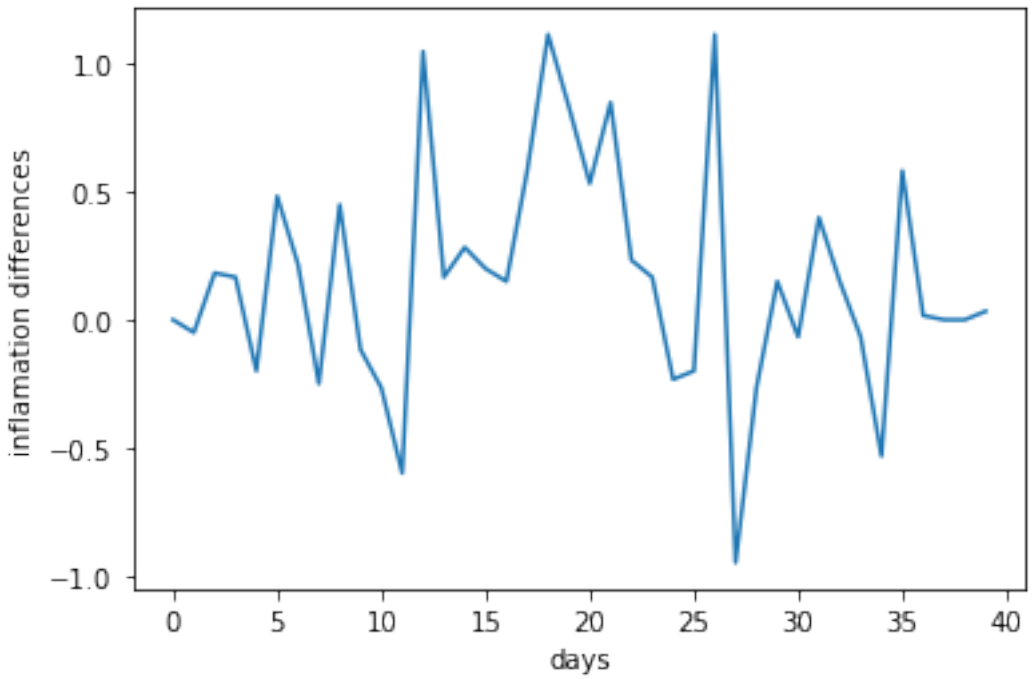
- Look back at what we did in notebook 05 and 06, how did we use the `numpy` function `loadtxt` to load data?
- When calculating the average, don't forget about the `axis` parameter.

The code below creates a list of the file names. Use that as the basis for completing the task.

[1]:
```
%matplotlib inline
import glob
import matplotlib.pyplot as plt
import numpy as np

filenames = sorted(glob.glob('../data/inflammation*.csv'))
```

[2]:
```
### answer here ###

# load the two files:
data0 = np.loadtxt(filenames[0], delimiter=',')
data1 = np.loadtxt(filenames[1], delimiter=',')

#calculate the differences:

differences = np.mean(data0, axis=0) - np.mean(data1, axis=0)

# make the plot:

plt.plot(differences)
plt.ylabel('inflamation differences')
plt.xlabel('days')
```

[2]:
```
Text(0.5, 0, 'days')
```


inflamation differences
1.0
0.5
0.0
−0.5
−1.0
0
5
10
15
20
25
30
35
40
days