

## analyse\_data

January 30, 2021

```
[1]: import matplotlib.pyplot as plt
import pandas as pd
```

```
[2]: df = pd.read_csv("onlocalhost.csv")
df.head()
```

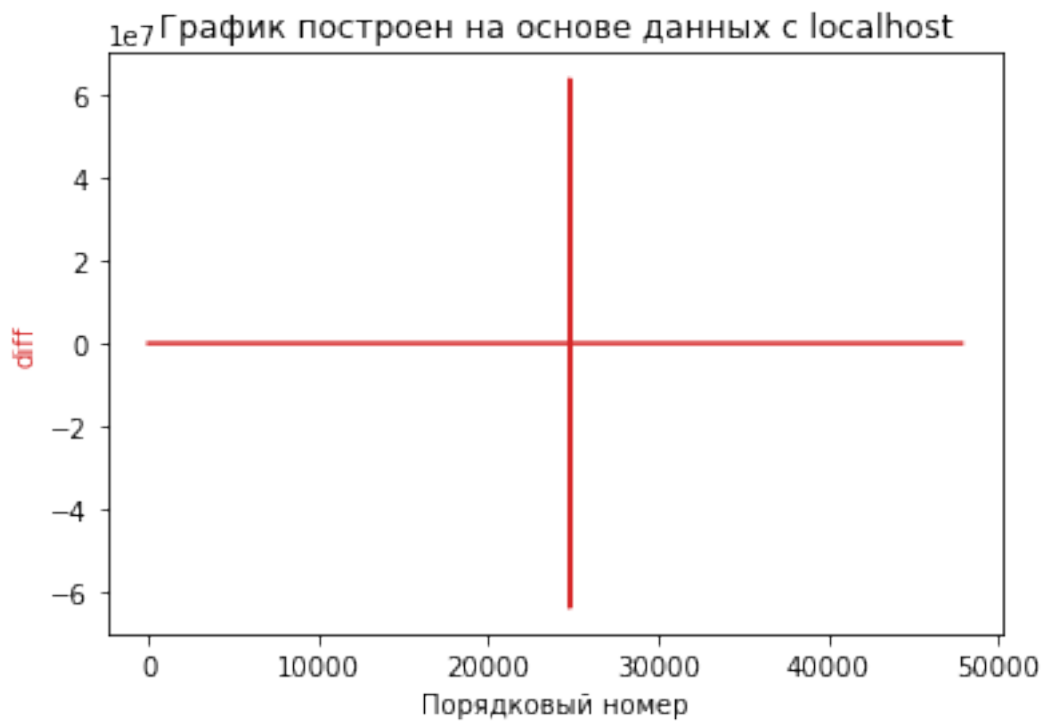
```
[2]:   RecvTime  oldRecvTime  SendTime  oldSendTime
0   25324960    25324960   25124436    25108576
1   25324993    25324960   25124452    25124436
2   25325009    25324993   25124469    25124452
3   25325009    25325009   25124469    25124469
4   25325025    25325009   25124485    25124469
```

```
[3]: diff = df["RecvTime"] - df["oldRecvTime"] - (df["SendTime"] - df["oldSendTime"])
diff.head()
```

```
[3]: 0   -15860
1      17
2     -1
3      0
4      0
dtype: int64
```

```
[4]: fig, ax1 = plt.subplots()

color = 'tab:red'
ax1.set_xlabel('')
ax1.set_ylabel('diff', color=color) # we already handled the x-label with ax1
ax1.plot(diff,color=color)
plt.title("localhost")
plt.show()
```



```
[5]: df = pd.read_csv("25mschannel.csv")
      df.head()
```

```
[5]:   RecvTime  oldRecvTime  SendTime  oldSendTime
0  61190955    61190955    60953696    60953679
1  61190988    61190955    60953696    60953696
2  61190988    61190988    60953712    60953696
3  61190988    61190988    60953712    60953712
4  61190988    61190988    60953729    60953712
```

```
[6]: diff = df["RecvTime"] - df["oldRecvTime"] - (df["SendTime"] - df["oldSendTime"])
      diff.head()
```

```
[6]: 0   -17
     1    33
     2   -16
     3     0
     4   -17
      dtype: int64
```

```
[7]: fig, ax1 = plt.subplots()

      color = 'tab:red'
```

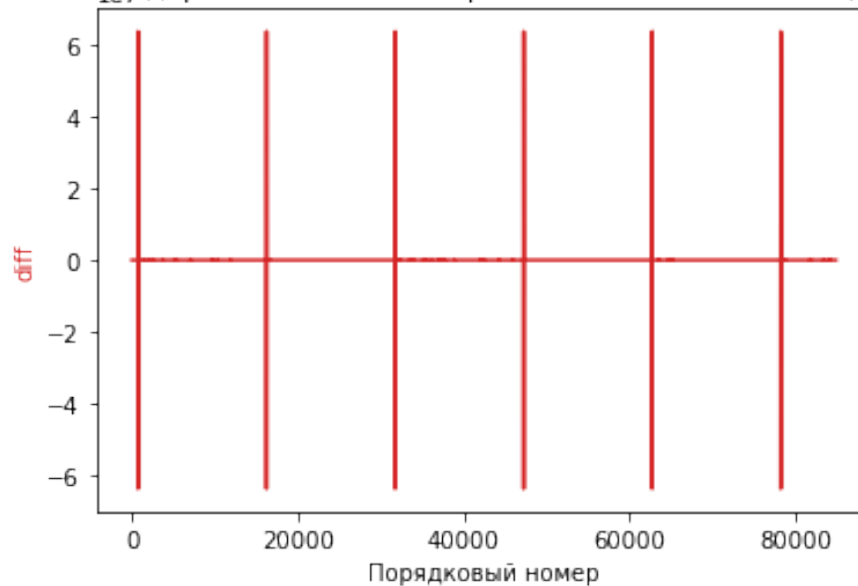
```

ax1.set_xlabel('')
ax1.set_ylabel('diff', color=color) # we already handled the x-label with ax1
ax1.plot(diff,color=color)

plt.title("""
25, 40 80""", omnet,
plt.show()

```

График построен на основе данных, при пропуске трафика через omnet, значение задержки канала было равно 25, а пинг был между 40 и 80



```

[8]: df = pd.read_csv("70mschannel.csv")
df.head()

```

```

[8]:   RecvTime  oldRecvTime  SendTime  oldSendTime
0   39004030   39004030   38720601   38702775
1   39004079   39004030   38734642   38720601
2   39004096   39004079   38734658   38734642
3   39004096   39004096   38734674   38734658
4   39004112   39004096   38734691   38734674

```

```

[9]: diff = df["RecvTime"] - df["oldRecvTime"] - (df["SendTime"] - df["oldSendTime"])
diff.head()

```

```

[9]: 0    -17826
1    -13992
2         1
3     -16

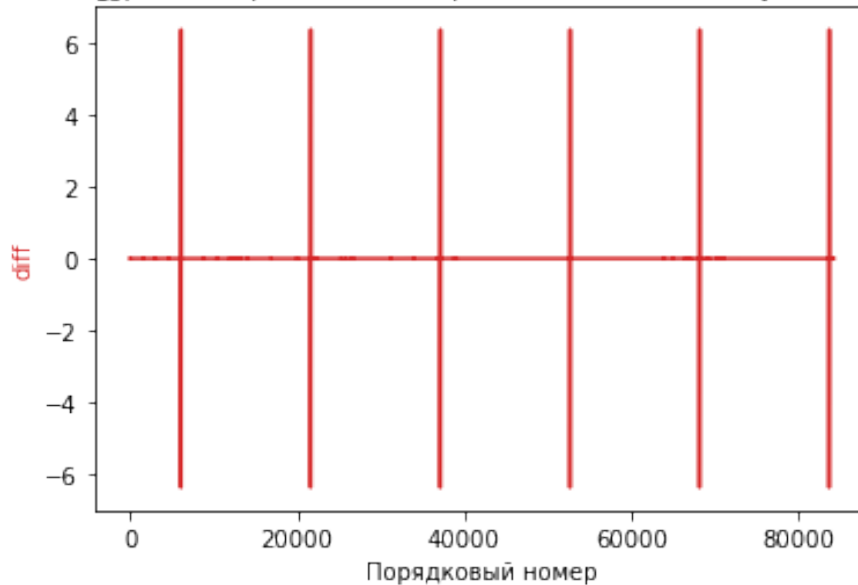
```

```
4      -1
dtype: int64
```

```
[10]: fig, ax1 = plt.subplots()

color = 'tab:red'
ax1.set_xlabel('')
ax1.set_ylabel('diff', color=color) # we already handled the x-label with ax1
ax1.plot(diff,color=color)
plt.title("""
          70,      150  190""")
plt.show()
```

График построен на основе данных, при пропуске трафика через omnet,  
значение задержки канала равно 70, пинг между 150 и 190



```
[11]: df = pd.read_csv("500rate.csv")
df.head()
```

```
[11]:   RecvTime  oldRecvTime  SendTime  oldSendTime
0  46682409    46682393  46460505    46441073
1  46682475    46682409  46473006    46460505
2  46682491    46682475  46473022    46473006
3  46682491    46682491  46473038    46473022
4  46682508    46682491  46473038    46473038
```

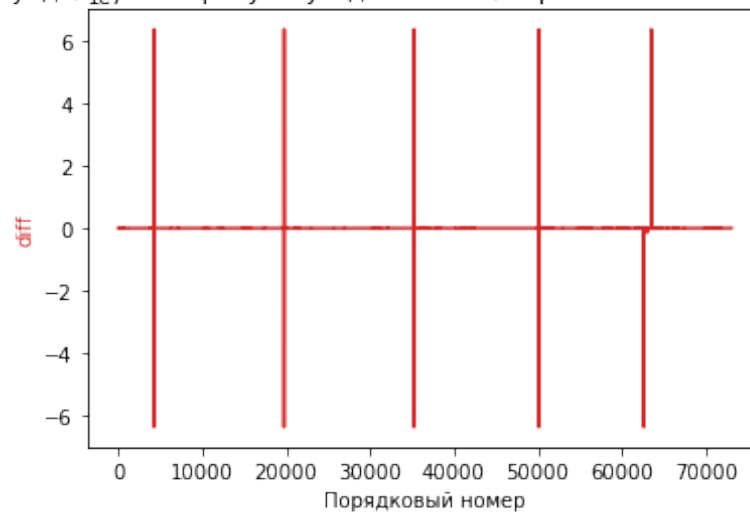
```
[12]: diff = df["RecvTime"] - df["oldRecvTime"] - (df["SendTime"] - df["oldSendTime"])
diff.head()
```

```
[12]: 0   -19416
      1   -12435
      2     0
      3    -16
      4     17
      dtype: int64
```

```
[13]: fig, ax1 = plt.subplots()

color = 'tab:red'
ax1.set_xlabel('')
ax1.set_ylabel('diff', color=color) # we already handled the x-label with ax1
ax1.plot(diff,color=color)
plt.title("""
    200 , 500 , omnet,
""")
plt.show()
```

График построен на основе данных, при пропуске трафика через omnet,  
на 200 секунде, снизил пропускную до 500кбит, картинка начала потихоньку плыть



```
[ ]:
```