

hera_0_2

February 15, 2023

```
[ ]: # Importação das bibliotecas
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from datetime import datetime
#registro de converters para uso do matplotlib
from pandas.plotting import register_matplotlib_converters
register_matplotlib_converters()
```

```
[ ]: data = pd.read_excel("C:
↪\\Users\\Riallen\\Documents\\Print_de_telas\\data2\\data_geral.xlsx")
data.head()
```

```
[ ]: Odds  Qt_Apostadores      Time_Odds  Data_Hora_Aposta  \
0  1.01      1976  Mon Feb 13 09:34:18 2023  2023-02-13 09:34:18
1  1.83      1930  Mon Feb 13 09:34:36 2023  2023-02-13 09:34:36
2  4.48      2073  Mon Feb 13 09:35:07 2023  2023-02-13 09:35:07
3  6.58      2104  Mon Feb 13 09:35:42 2023  2023-02-13 09:35:42
4  1.53      2065  Mon Feb 13 09:36:01 2023  2023-02-13 09:36:01
```

```
      Date_Aposta Hora_Aposta  hour
0  2023-02-13    09:34:18      9
1  2023-02-13    09:34:36      9
2  2023-02-13    09:35:07      9
3  2023-02-13    09:35:42      9
4  2023-02-13    09:36:01      9
```

```
[ ]: i = 0
t = len(data['Hora_Aposta'])
#print(t)
segundo = []
minuto = []
for j in range(0,t):
    #print(data['Hora_Aposta'][j])
    #print(data['Hora_Aposta'][j].split(":"))
    x = data['Hora_Aposta'][j].split(":")
    segundo.append(float(x[2]))
    minuto.append(float(x[1]))
```

```

for j in range(0,t):
    segundo[j] = segundo[j]/60
    minuto[j] = minuto[j] + round(segundo[j],6)

for j in range(0,t):
    minuto[j] = round(minuto[j]/60, 6)

data['hour_edi'] = data['hour']
for j in range(0,t):
    data['hour_edi'][j] = data['hour_edi'][j] + minuto[j]

data['hour_edi']

```

C:\Users\Riallen\AppData\Local\Temp\ipykernel_7632\1362838707.py:22:

SettingWithCopyWarning:

A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy

```
data['hour_edi'][j] = data['hour_edi'][j] + minuto[j]
```

```

[ ]: 0      9.571667
     1      9.576667
     2      9.585278
     3      9.595000
     4      9.600278
     ...
    3303     9.479722
    3304     9.484444
    3305     9.488611
    3306     9.495556
    3307    12.813611
     Name: hour_edi, Length: 3308, dtype: float64

```

```
[ ]: data['Hora_Aposta'].describe()
```

```

[ ]: count      3308
     unique      3308
     top      09:34:18
     freq         1
     Name: Hora_Aposta, dtype: object

```

```

[ ]: data1 = data[data['Date_Aposta'] == '2023-02-13']
     data2 = data[data['Date_Aposta'] == '2023-02-14']
     data1

```

```
[ ]:      Odds  Qt_Apostadores      Time_Odds      Data_Hora_Aposta \
0      1.01      1976 Mon Feb 13 09:34:18 2023 2023-02-13 09:34:18
1      1.83      1930 Mon Feb 13 09:34:36 2023 2023-02-13 09:34:36
2      4.48      2073 Mon Feb 13 09:35:07 2023 2023-02-13 09:35:07
3      6.58      2104 Mon Feb 13 09:35:42 2023 2023-02-13 09:35:42
4      1.53      2065 Mon Feb 13 09:36:01 2023 2023-02-13 09:36:01
...      ...      ...      ...      ...
1867   3.54      3299 Mon Feb 13 23:58:15 2023 2023-02-13 23:58:15
1868  15.38      3234 Mon Feb 13 23:59:02 2023 2023-02-13 23:59:02
1869   1.11      3110 Mon Feb 13 23:59:16 2023 2023-02-13 23:59:16
1870   1.32      2593 Mon Feb 13 23:59:31 2023 2023-02-13 23:59:31
1871   1.00      2548 Mon Feb 13 23:59:44 2023 2023-02-13 23:59:44
```

```
      Date_Aposta Hora_Aposta  hour  hour_edt
0      2023-02-13   09:34:18     9   9.571667
1      2023-02-13   09:34:36     9   9.576667
2      2023-02-13   09:35:07     9   9.585278
3      2023-02-13   09:35:42     9   9.595000
4      2023-02-13   09:36:01     9   9.600278
...      ...      ...      ...      ...
1867  2023-02-13   23:58:15    23  23.970833
1868  2023-02-13   23:59:02    23  23.983889
1869  2023-02-13   23:59:16    23  23.987778
1870  2023-02-13   23:59:31    23  23.991944
1871  2023-02-13   23:59:44    23  23.995556
```

[1872 rows x 8 columns]

```
[ ]: data2
```

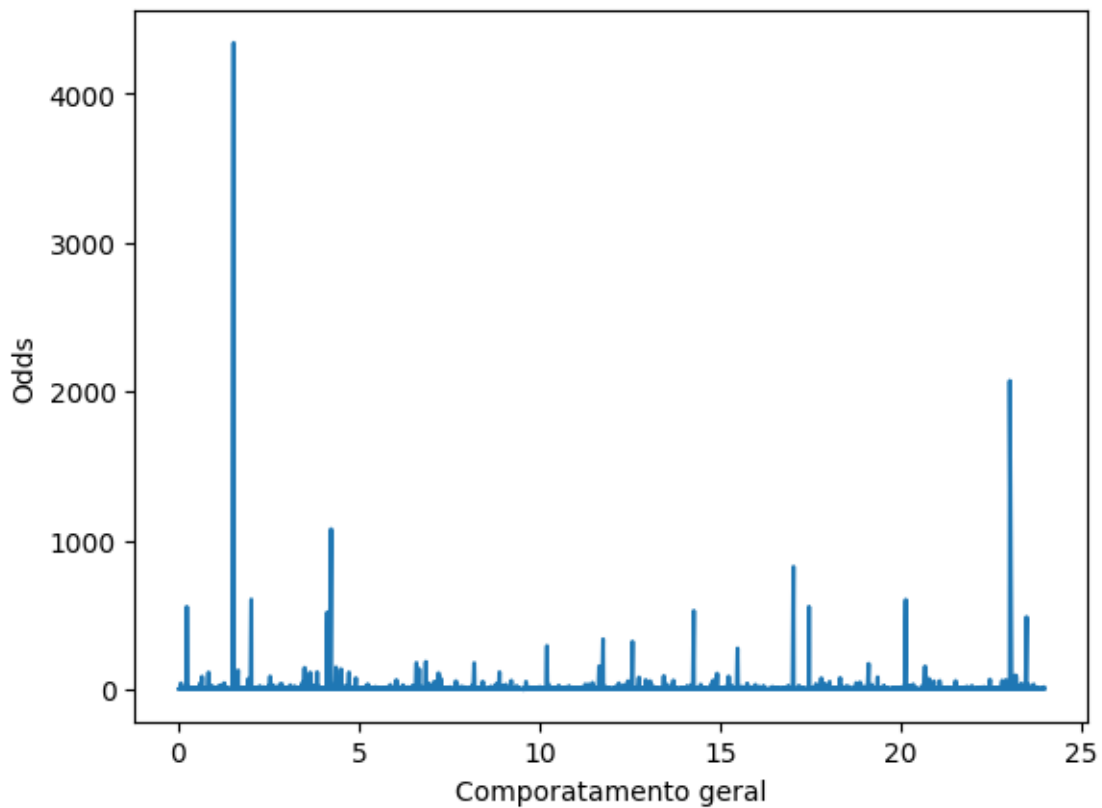
```
[ ]:      Odds  Qt_Apostadores      Time_Odds      Data_Hora_Aposta \
1872  1.91      2618 Tue Feb 14 00:00:04 2023 2023-02-14 00:00:04
1873  2.38      3085 Tue Feb 14 00:00:29 2023 2023-02-14 00:00:29
1874  1.56      3418 Tue Feb 14 00:00:46 2023 2023-02-14 00:00:46
1875  1.30      2934 Tue Feb 14 00:01:02 2023 2023-02-14 00:01:02
1876  1.04      2465 Tue Feb 14 00:01:15 2023 2023-02-14 00:01:15
...      ...      ...      ...      ...
3303  2.03      1922 Tue Feb 14 09:28:47 2023 2023-02-14 09:28:47
3304  1.22      2137 Tue Feb 14 09:29:04 2023 2023-02-14 09:29:04
3305  1.01      1793 Tue Feb 14 09:29:19 2023 2023-02-14 09:29:19
3306  2.54      2003 Tue Feb 14 09:29:44 2023 2023-02-14 09:29:44
3307  1.27      1835 Tue Feb 14 12:48:49 2023 2023-02-14 12:48:49
```

```
      Date_Aposta Hora_Aposta  hour  hour_edt
1872  2023-02-14   00:00:04     0   0.001111
1873  2023-02-14   00:00:29     0   0.008056
1874  2023-02-14   00:00:46     0   0.012778
```

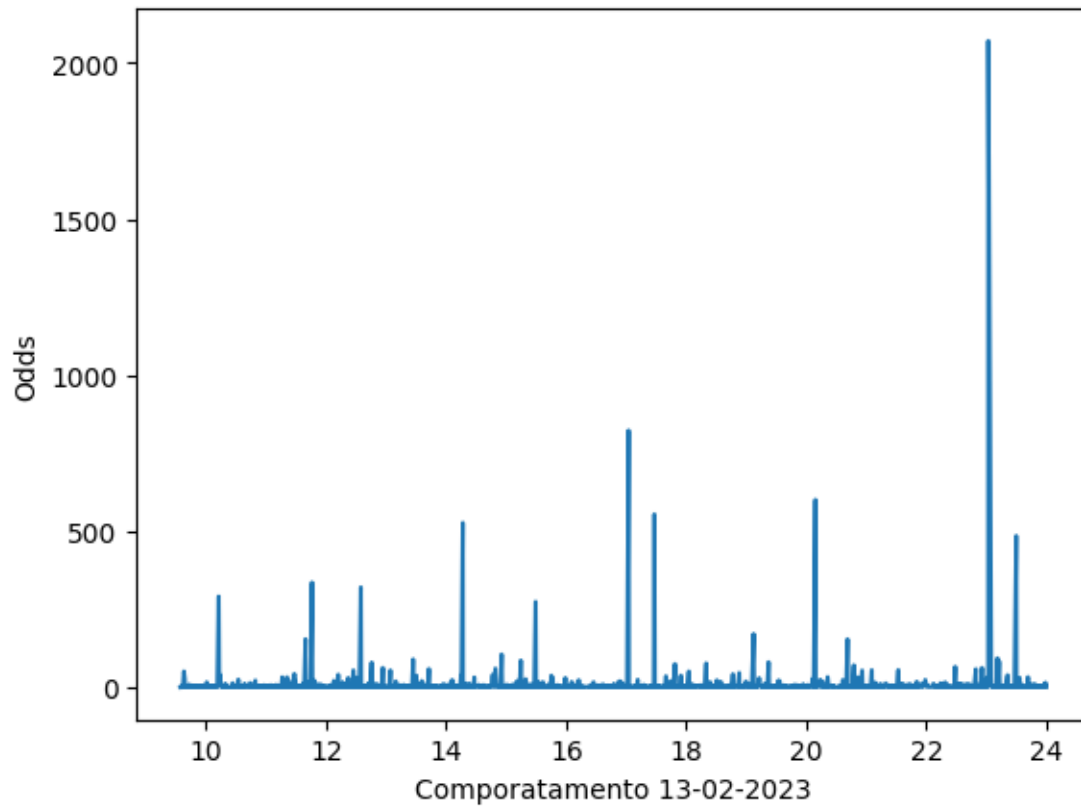
1875	2023-02-14	00:01:02	0	0.017222
1876	2023-02-14	00:01:15	0	0.020833
...
3303	2023-02-14	09:28:47	9	9.479722
3304	2023-02-14	09:29:04	9	9.484444
3305	2023-02-14	09:29:19	9	9.488611
3306	2023-02-14	09:29:44	9	9.495556
3307	2023-02-14	12:48:49	12	12.813611

[1436 rows x 8 columns]

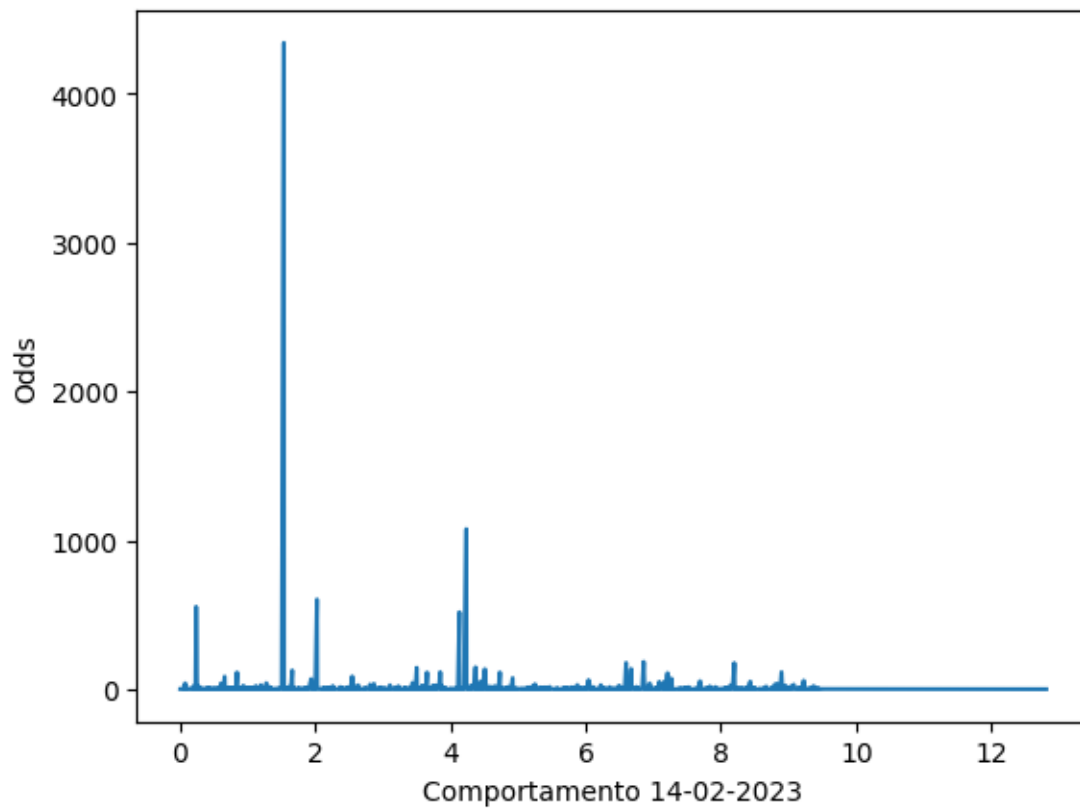
```
[ ]: plt.plot(np.array(data['hour_edi']), np.array(data['Odds']))
plt.xlabel("Comportamento geral")
plt.ylabel("Odds")
plt.show()
```



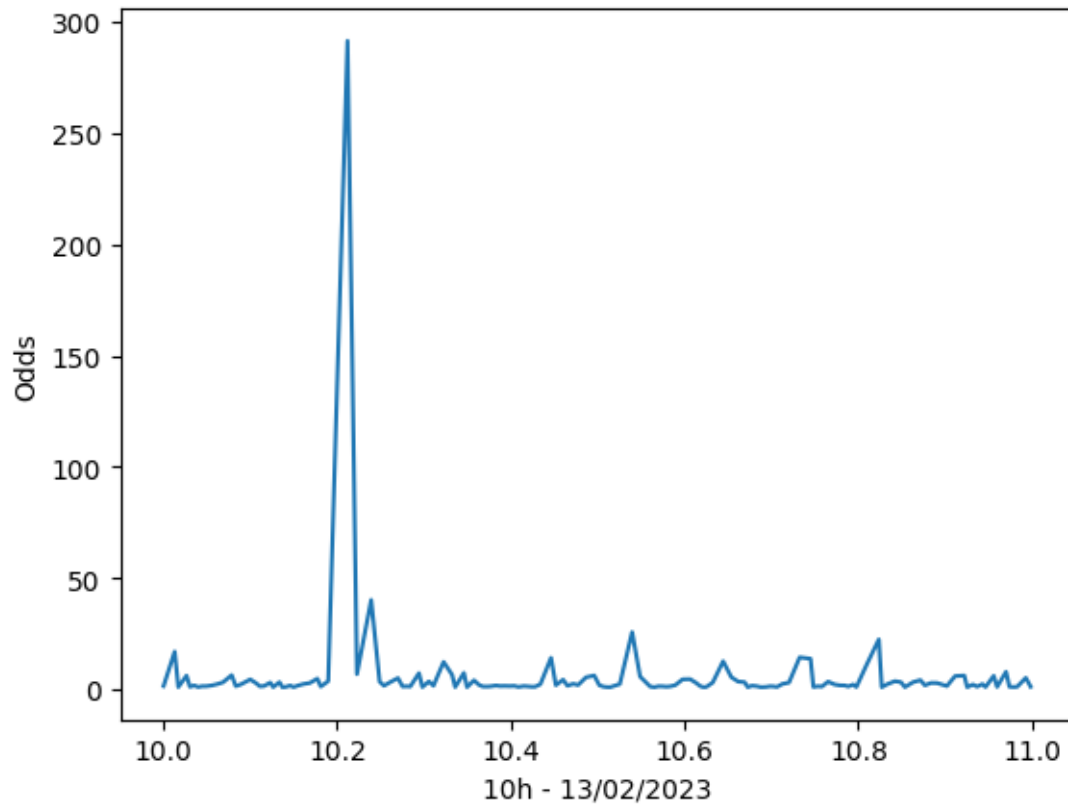
```
[ ]: plt.plot(np.array(data1['hour_edi']), np.array(data1['Odds']))
plt.xlabel("Comportamento 13-02-2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: plt.plot(np.array(data2['hour_edi']), np.array(data2['Odds']))  
plt.xlabel("Comportamento 14-02-2023")  
plt.ylabel("Odds")  
plt.show()
```



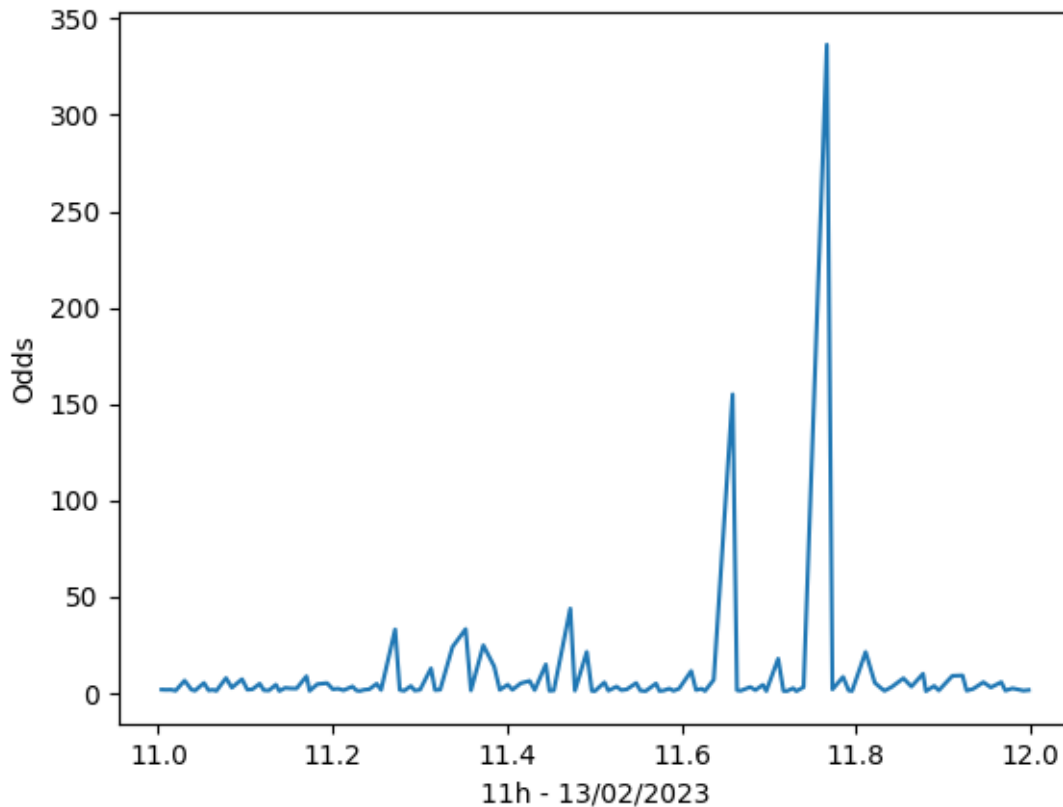
```
[ ]: X1 = data1[data1['hour'] == 10]
plt.plot(np.array(X1['hour_edi']), np.array(X1['Odds']))
plt.xlabel("10h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora: 10h - Geral: ', len(X1['Odds']), '\n',
"Media >= 1.29: ", len(X1[X1['Odds'] >= 1.29])/len(X1['Odds']), '\n',
"Media >= 1.40: ", len(X1[X1['Odds'] >= 1.40])/len(X1['Odds']), '\n',
"Media >= 1.45: ", len(X1[X1['Odds'] >= 1.45])/len(X1['Odds']), '\n',
"Media >= 1.61: ", len(X1[X1['Odds'] >= 1.65])/len(X1['Odds']), '\n')
```

```
Hora: 10h - Geral: 153
Media >= 1.29: 0.7450980392156863
Media >= 1.40: 0.673202614379085
Media >= 1.45: 0.6274509803921569
Media >= 1.61: 0.5555555555555556
```

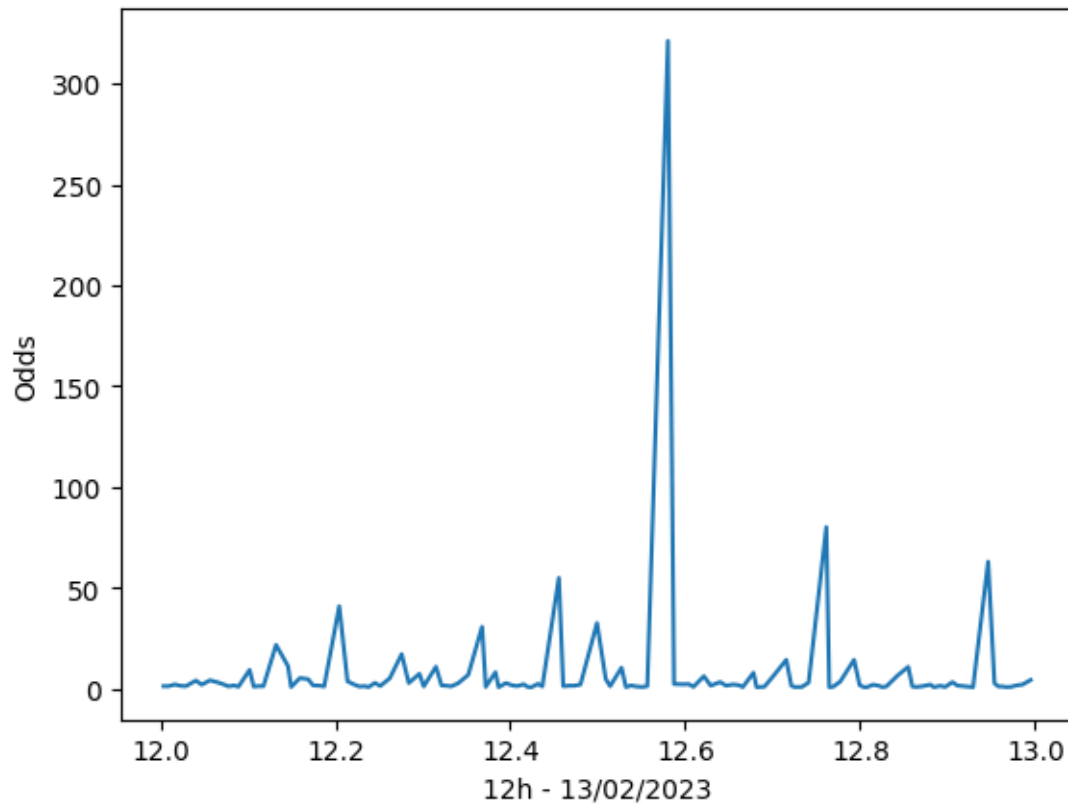
```
[ ]: X2 = data1[data1['hour'] == 11]
plt.plot(np.array(X2['hour_edi']), np.array(X2['Odds']))
plt.xlabel("11h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 11h - Geral: ', len(X2['Odds']), '\n',
"Media >= 1.29: ", len(X2[X2['Odds'] >= 1.29])/len(X2['Odds']), '\n',
"Media >= 1.40: ", len(X2[X2['Odds'] >= 1.40])/len(X2['Odds']), '\n',
"Media >= 1.45: ", len(X2[X2['Odds'] >= 1.45])/len(X2['Odds']), '\n',
"Media >= 1.61: ", len(X2[X2['Odds'] >= 1.65])/len(X2['Odds']), '\n')
```

```
Hora 11h - Geral: 126
Media >= 1.29: 0.8015873015873016
Media >= 1.40: 0.7222222222222222
Media >= 1.45: 0.7063492063492064
Media >= 1.61: 0.6349206349206349
```

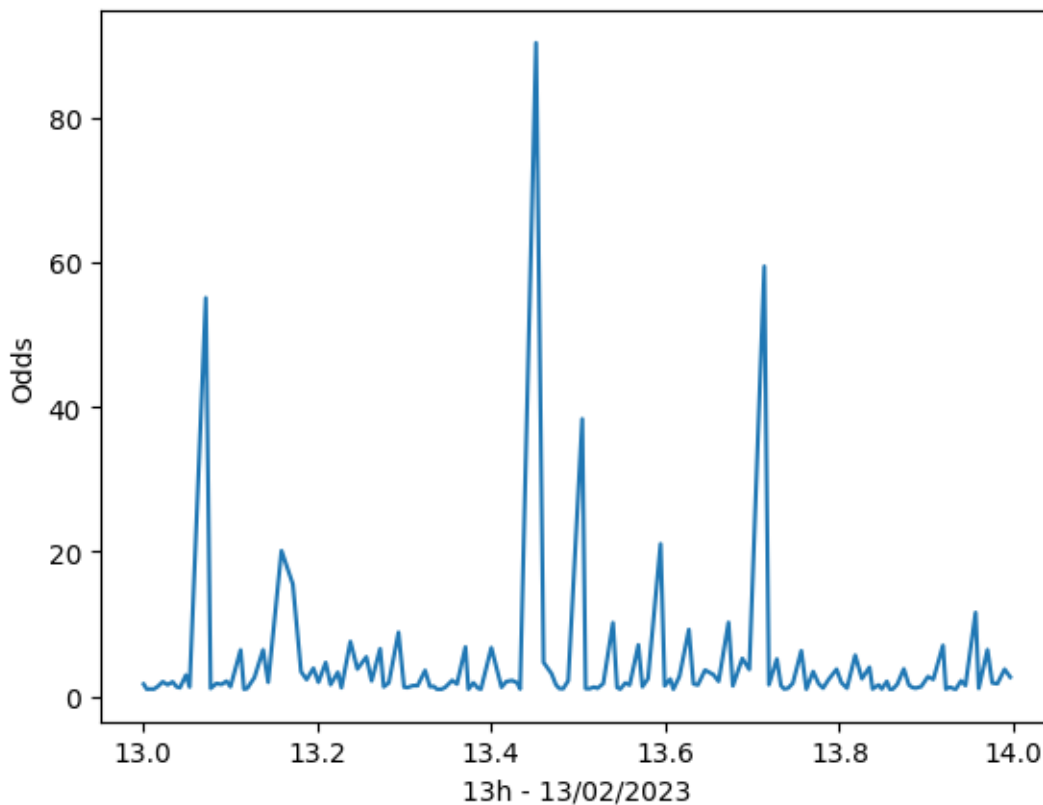
```
[ ]: X3 = data1[data1['hour'] == 12]
plt.plot(np.array(X3['hour_edi']), np.array(X3['Odds']))
plt.xlabel("12h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```

```
[ ]: print('Hora: 12h - Geral: ', len(X3['Odds']), '\n',
"Media >= 1.29: ", len(X3[X3['Odds'] >= 1.29])/len(X3['Odds']), '\n',
"Media >= 1.40: ", len(X3[X3['Odds'] >= 1.40])/len(X3['Odds']), '\n',
"Media >= 1.45: ", len(X3[X3['Odds'] >= 1.45])/len(X3['Odds']), '\n',
"Media >= 1.61: ", len(X3[X3['Odds'] >= 1.65])/len(X3['Odds']), '\n')
```

```
Hora: 12h - Geral: 129
Media >= 1.29: 0.7751937984496124
Media >= 1.40: 0.7054263565891473
Media >= 1.45: 0.6744186046511628
Media >= 1.61: 0.5736434108527132
```

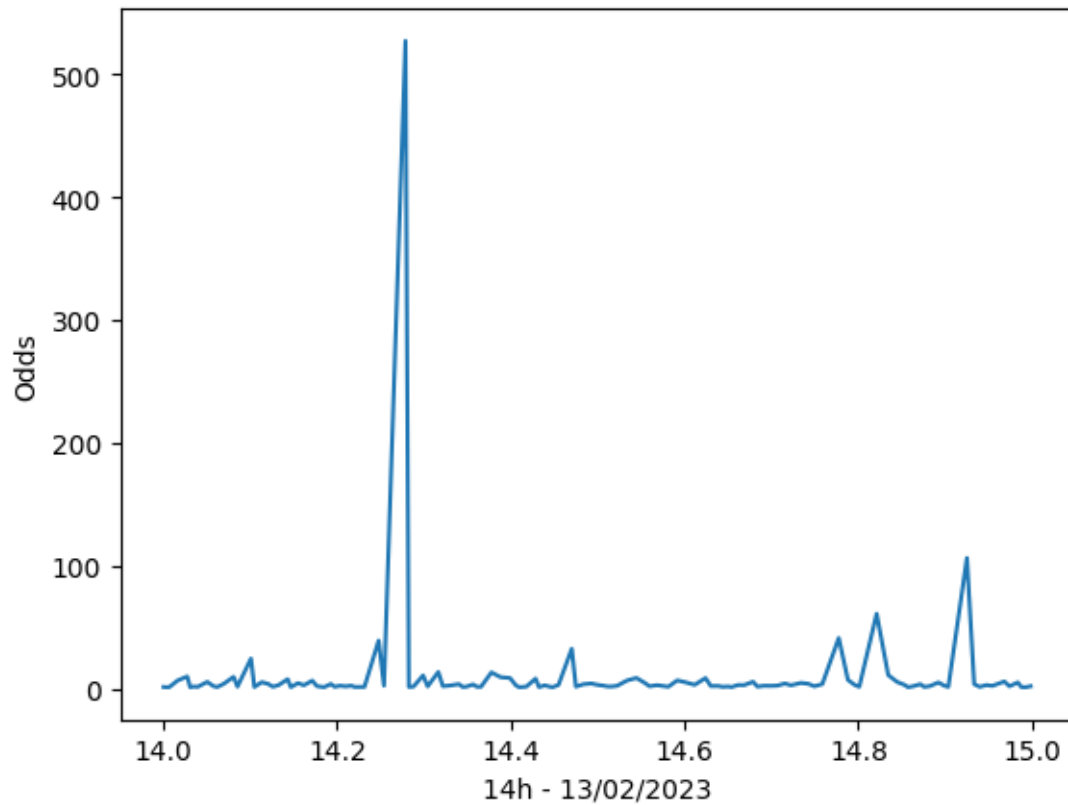
```
[ ]: X4 = data1[data1['hour'] == 13]
plt.plot(np.array(X4['hour_edi']), np.array(X4['Odds']))
plt.xlabel("13h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 13h - Geral: ', len(X4['Odds']), '\n',
"Media >= 1.29: ", len(X4[X4['Odds'] >= 1.29])/len(X4['Odds']), '\n',
"Media >= 1.40: ", len(X4[X4['Odds'] >= 1.40])/len(X4['Odds']), '\n',
"Media >= 1.45: ", len(X4[X4['Odds'] >= 1.45])/len(X4['Odds']), '\n',
"Media >= 1.61: ", len(X4[X4['Odds'] >= 1.65])/len(X4['Odds']), '\n')
```

```
Hora 13h - Geral: 149
Media >= 1.29: 0.7315436241610739
Media >= 1.40: 0.6510067114093959
Media >= 1.45: 0.6510067114093959
Media >= 1.61: 0.5570469798657718
```

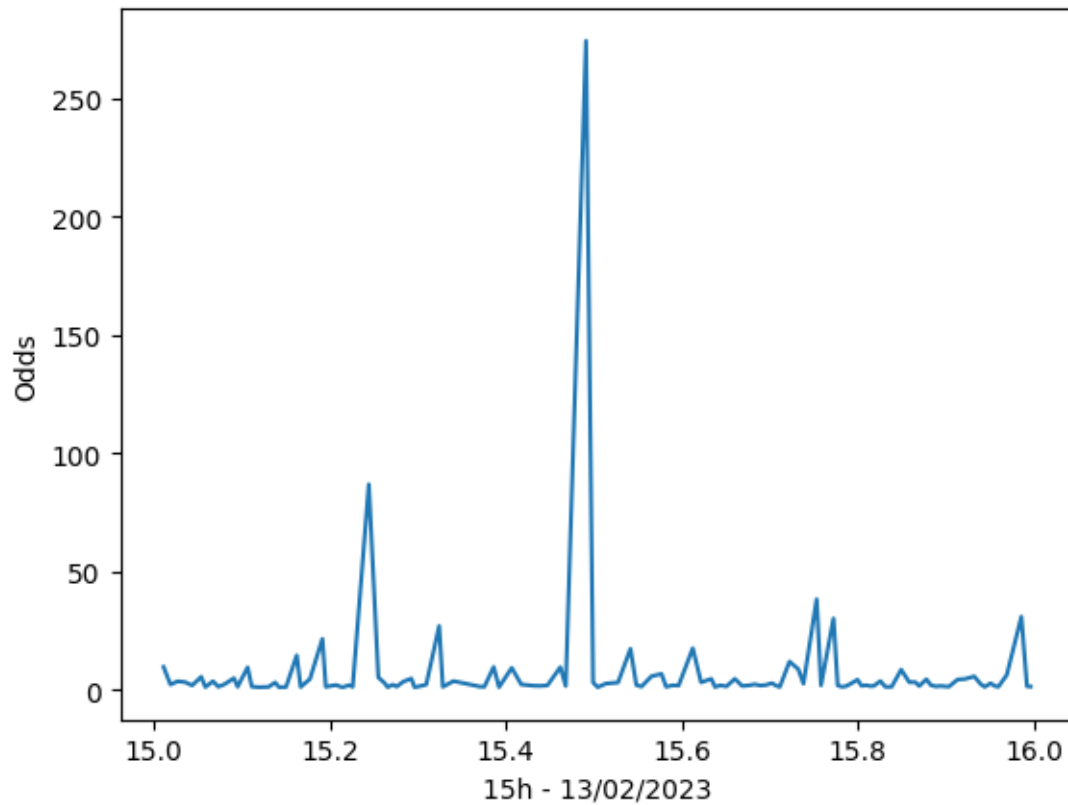
```
[ ]: X5 = data1[data1['hour'] == 14]
plt.plot(np.array(X5['hour_edi']), np.array(X5['Odds']))
plt.xlabel("14h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 14h - Geral: ', len(X5['Odds']), '\n',
"Media >= 1.29: ", len(X5[X5['Odds'] >= 1.29])/len(X5['Odds']), '\n',
"Media >= 1.40: ", len(X5[X5['Odds'] >= 1.40])/len(X5['Odds']), '\n',
"Media >= 1.45: ", len(X5[X5['Odds'] >= 1.45])/len(X5['Odds']), '\n',
"Media >= 1.61: ", len(X5[X5['Odds'] >= 1.65])/len(X5['Odds']), '\n')
```

```
Hora 14h - Geral: 130
Media >= 1.29: 0.8153846153846154
Media >= 1.40: 0.7538461538461538
Media >= 1.45: 0.7384615384615385
Media >= 1.61: 0.6615384615384615
```

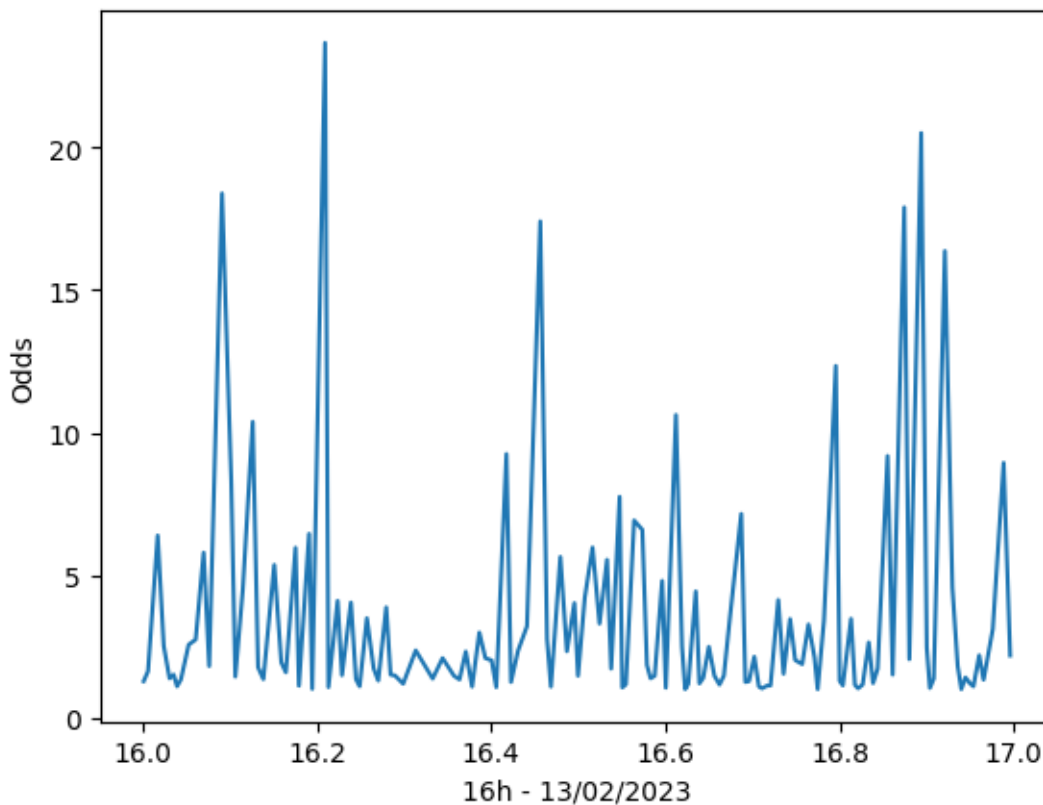
```
[ ]: X6 = data1[data1['hour'] == 15]
plt.plot(np.array(X6['hour_edi']), np.array(X6['Odds']))
plt.xlabel("15h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 15h - Geral: ', len(X6['Odds']), '\n',
"Media >= 1.29: ", len(X6[X6['Odds'] >= 1.29])/len(X6['Odds']), '\n',
"Media >= 1.40: ", len(X6[X6['Odds'] >= 1.40])/len(X6['Odds']), '\n',
"Media >= 1.45: ", len(X6[X6['Odds'] >= 1.45])/len(X6['Odds']), '\n',
"Media >= 1.61: ", len(X6[X6['Odds'] >= 1.65])/len(X6['Odds']), '\n')
```

```
Hora 15h - Geral: 128
Media >= 1.29: 0.703125
Media >= 1.40: 0.671875
Media >= 1.45: 0.671875
Media >= 1.61: 0.5859375
```

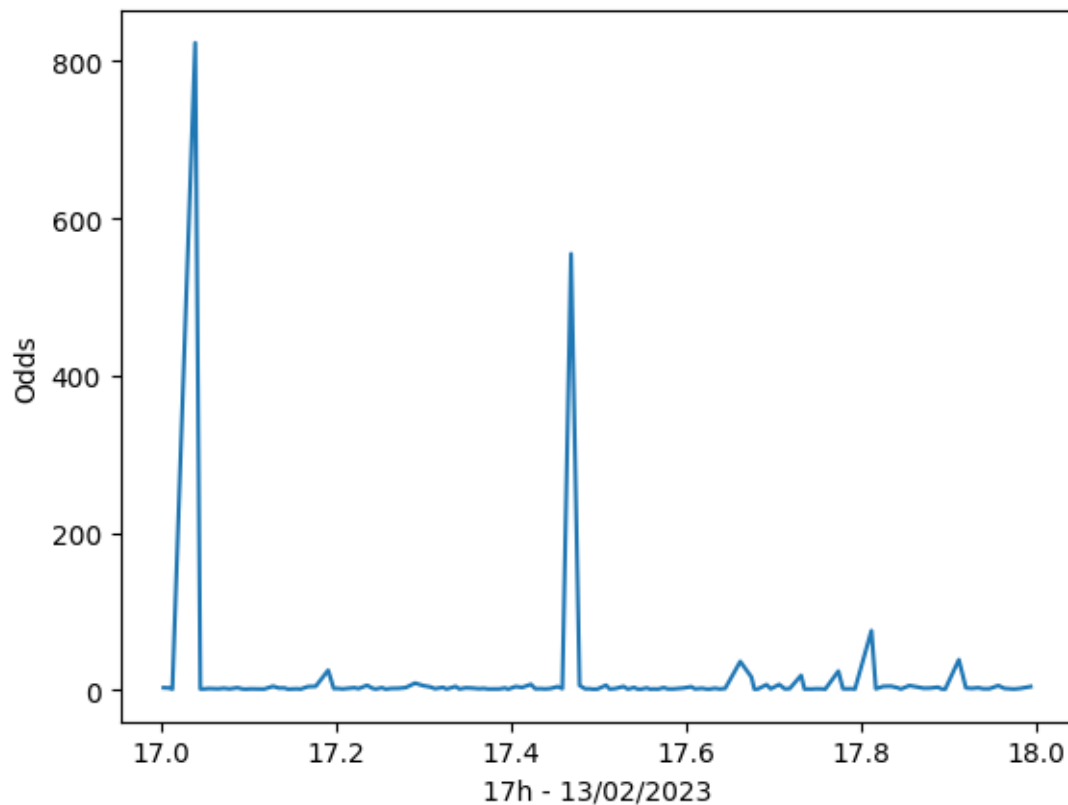
```
[ ]: X7 = data1[data1['hour'] == 16]
plt.plot(np.array(X7['hour_edi']), np.array(X7['Odds']))
plt.xlabel("16h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 16h - Geral: ', len(X7['Odds']), '\n',
"Media >= 1.29: ", len(X7[X7['Odds'] >= 1.29])/len(X7['Odds']), '\n',
"Media >= 1.40: ", len(X7[X7['Odds'] >= 1.40])/len(X7['Odds']), '\n',
"Media >= 1.45: ", len(X7[X7['Odds'] >= 1.45])/len(X7['Odds']), '\n',
"Media >= 1.61: ", len(X7[X7['Odds'] >= 1.65])/len(X7['Odds']), '\n')
```

```
Hora 16h - Geral: 136
Media >= 1.29: 0.75
Media >= 1.40: 0.6691176470588235
Media >= 1.45: 0.6470588235294118
Media >= 1.61: 0.5514705882352942
```

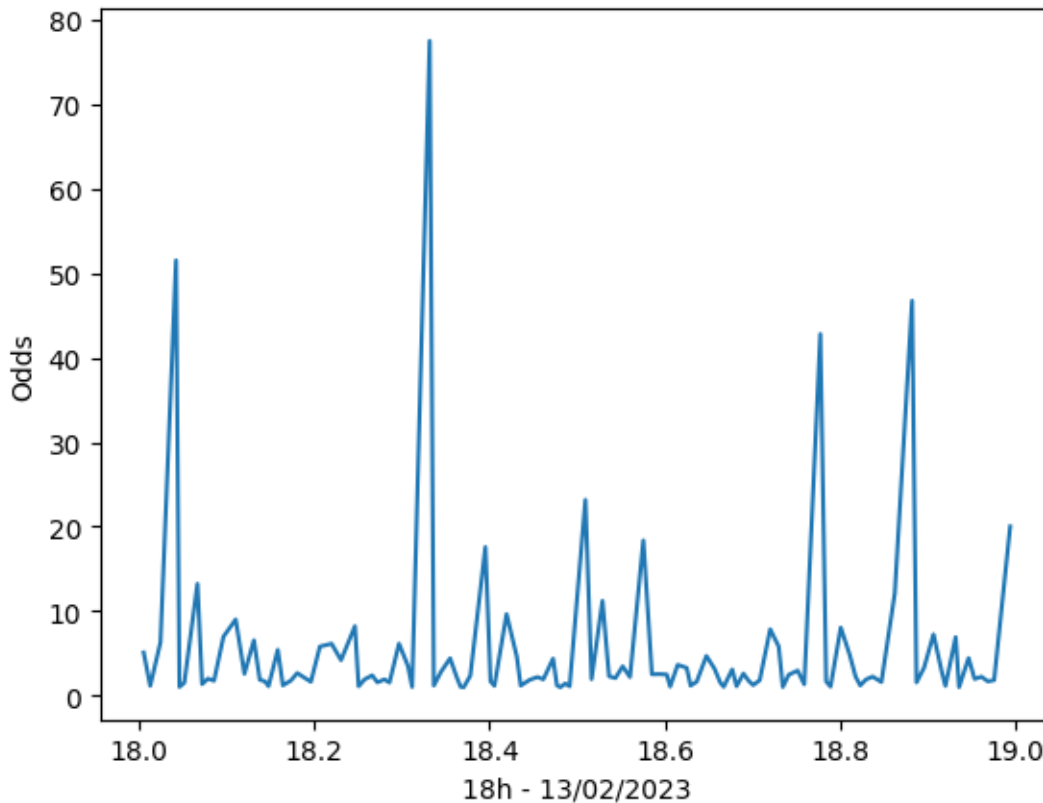
```
[ ]: X8 = data1[data1['hour'] == 17]
plt.plot(np.array(X8['hour_edi']), np.array(X8['Odds']))
plt.xlabel("17h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 17h - Geral: ', len(X8['Odds']), '\n',
"Media >= 1.29: ", len(X8[X8['Odds'] >= 1.29])/len(X8['Odds']), '\n',
"Media >= 1.40: ", len(X8[X8['Odds'] >= 1.40])/len(X8['Odds']), '\n',
"Media >= 1.45: ", len(X8[X8['Odds'] >= 1.45])/len(X8['Odds']), '\n',
"Media >= 1.61: ", len(X8[X8['Odds'] >= 1.65])/len(X8['Odds']), '\n')
```

```
Hora 17h - Geral: 147
Media >= 1.29: 0.7482993197278912
Media >= 1.40: 0.673469387755102
Media >= 1.45: 0.6326530612244898
Media >= 1.61: 0.54421768707483
```

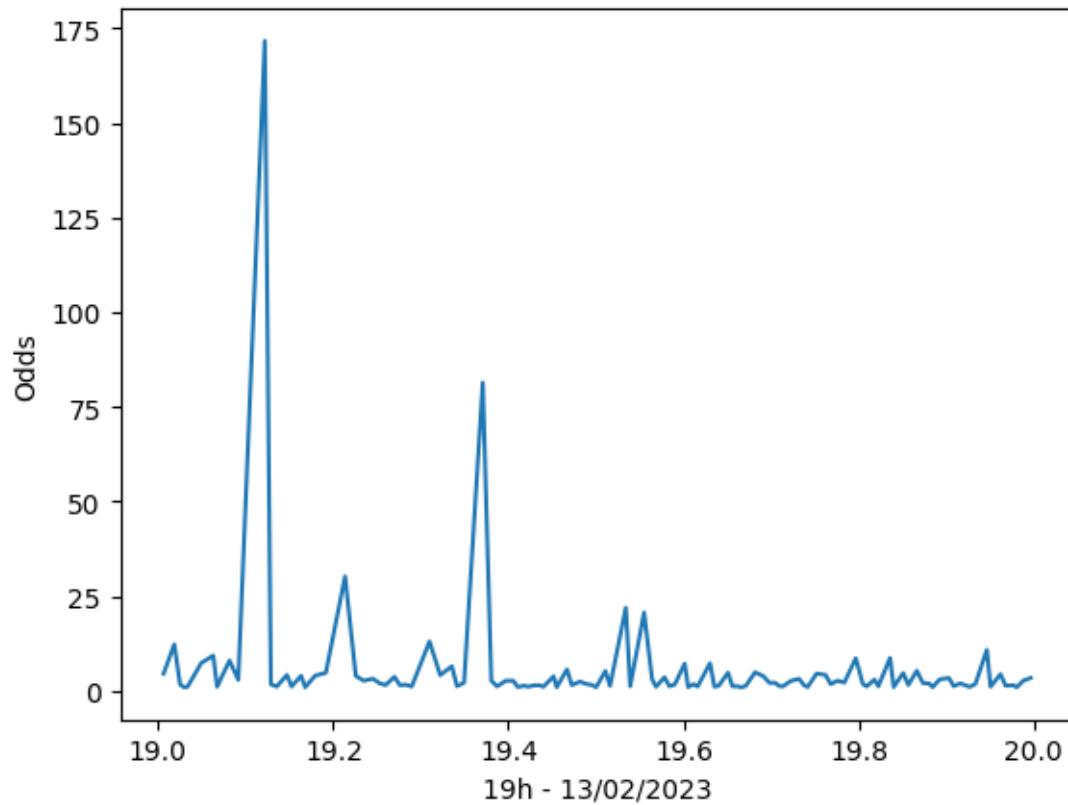
```
[ ]: X9 = data1[data1['hour'] == 18]
plt.plot(np.array(X9['hour_edi']), np.array(X9['Odds']))
plt.xlabel("18h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 18h - Geral: ', len(X9['Odds']), '\n',
"Media >= 1.29: ", len(X9[X9['Odds'] >= 1.29])/len(X9['Odds']), '\n',
"Media >= 1.40: ", len(X9[X9['Odds'] >= 1.40])/len(X9['Odds']), '\n',
"Media >= 1.45: ", len(X9[X9['Odds'] >= 1.45])/len(X9['Odds']), '\n',
"Media >= 1.61: ", len(X9[X9['Odds'] >= 1.65])/len(X9['Odds']), '\n')
```

```
Hora 18h - Geral: 115
Media >= 1.29: 0.7913043478260869
Media >= 1.40: 0.7739130434782608
Media >= 1.45: 0.7652173913043478
Media >= 1.61: 0.7043478260869566
```

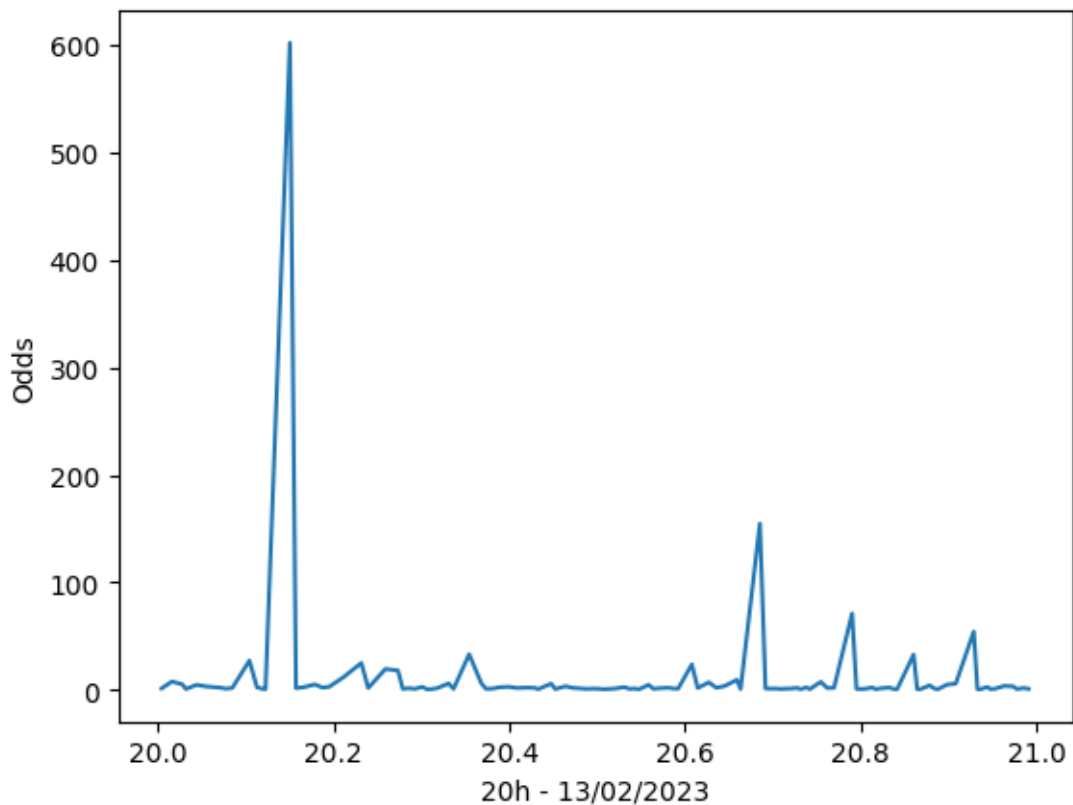
```
[ ]: X10 = data1[data1['hour'] == 19]
plt.plot(np.array(X10['hour_edi']), np.array(X10['Odds']))
plt.xlabel("19h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 19h - Geral: ', len(X10['Odds']), '\n',
"Media >= 1.29: ", len(X10[X10['Odds'] >= 1.29])/len(X10['Odds']), '\n',
"Media >= 1.40: ", len(X10[X10['Odds'] >= 1.40])/len(X10['Odds']), '\n',
"Media >= 1.45: ", len(X10[X10['Odds'] >= 1.45])/len(X10['Odds']), '\n',
"Media >= 1.61: ", len(X10[X10['Odds'] >= 1.65])/len(X10['Odds']), '\n')
```

```
Hora 19h - Geral: 118
Media >= 1.29: 0.7203389830508474
Media >= 1.40: 0.6779661016949152
Media >= 1.45: 0.6694915254237288
Media >= 1.61: 0.5847457627118644
```

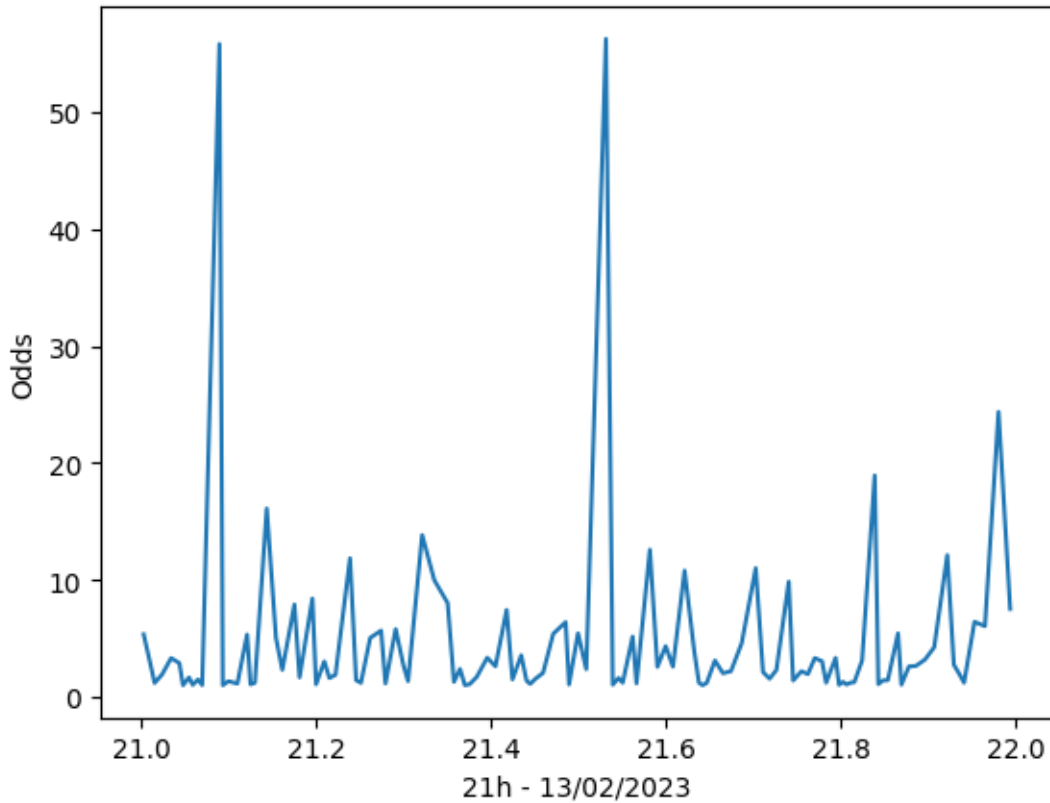
```
[ ]: X11 = data1[data1['hour'] == 20]
plt.plot(np.array(X11['hour_edi']), np.array(X11['Odds']))
plt.xlabel("20h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```

```
[ ]: print('Hora 20h - Geral: ', len(X11['Odds']), '\n',
"Media >= 1.29: ", len(X11[X11['Odds'] >= 1.29])/len(X11['Odds']), '\n',
"Media >= 1.40: ", len(X11[X11['Odds'] >= 1.40])/len(X11['Odds']), '\n',
"Media >= 1.45: ", len(X11[X11['Odds'] >= 1.45])/len(X11['Odds']), '\n',
"Media >= 1.61: ", len(X11[X11['Odds'] >= 1.65])/len(X11['Odds']), '\n')
```

```
Hora 20h - Geral: 115
Media >= 1.29: 0.782608695652174
Media >= 1.40: 0.6956521739130435
Media >= 1.45: 0.6782608695652174
Media >= 1.61: 0.5739130434782609
```

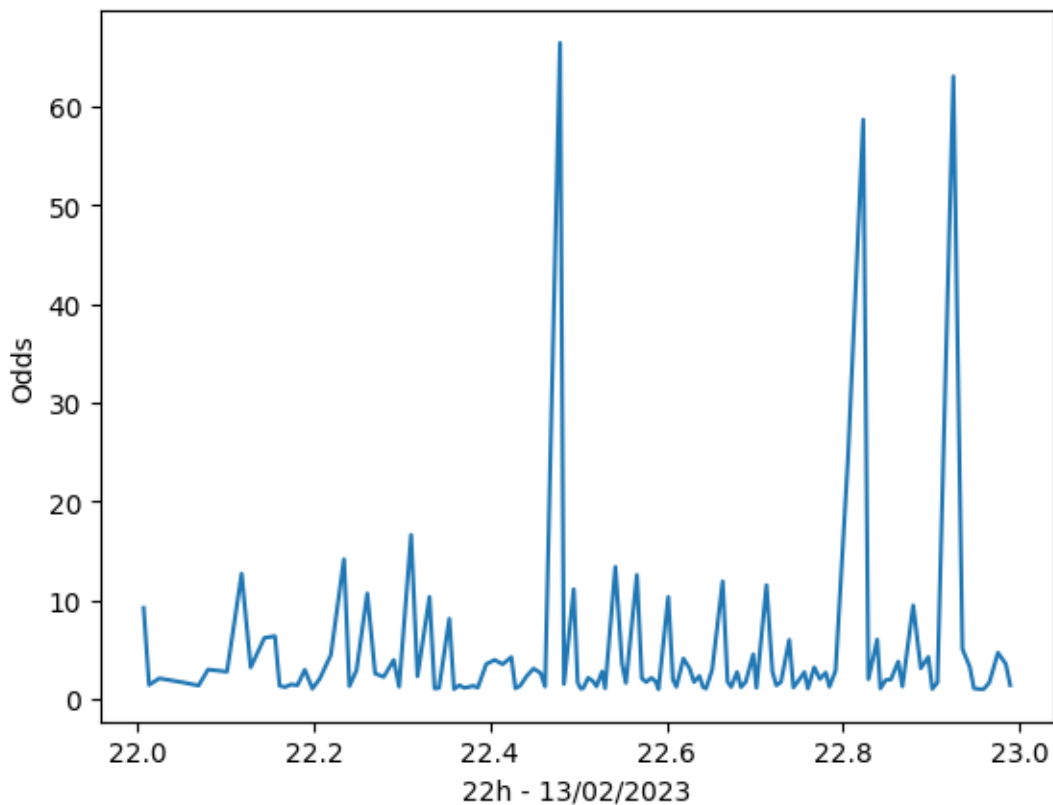
```
[ ]: X12 = data1[data1['hour'] == 21]
plt.plot(np.array(X12['hour_edi']), np.array(X12['Odds']))
plt.xlabel("21h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 21h - Geral: ', len(X12['Odds']), '\n',
"Media >= 1.29: ", len(X12[X12['Odds'] >= 1.29])/len(X12['Odds']), '\n',
"Media >= 1.40: ", len(X12[X12['Odds'] >= 1.40])/len(X12['Odds']), '\n',
"Media >= 1.45: ", len(X12[X12['Odds'] >= 1.45])/len(X12['Odds']), '\n',
"Media >= 1.61: ", len(X12[X12['Odds'] >= 1.65])/len(X12['Odds']), '\n')
```

```
Hora 21h - Geral: 115
Media >= 1.29: 0.7304347826086957
Media >= 1.40: 0.6956521739130435
Media >= 1.45: 0.6608695652173913
Media >= 1.61: 0.6086956521739131
```

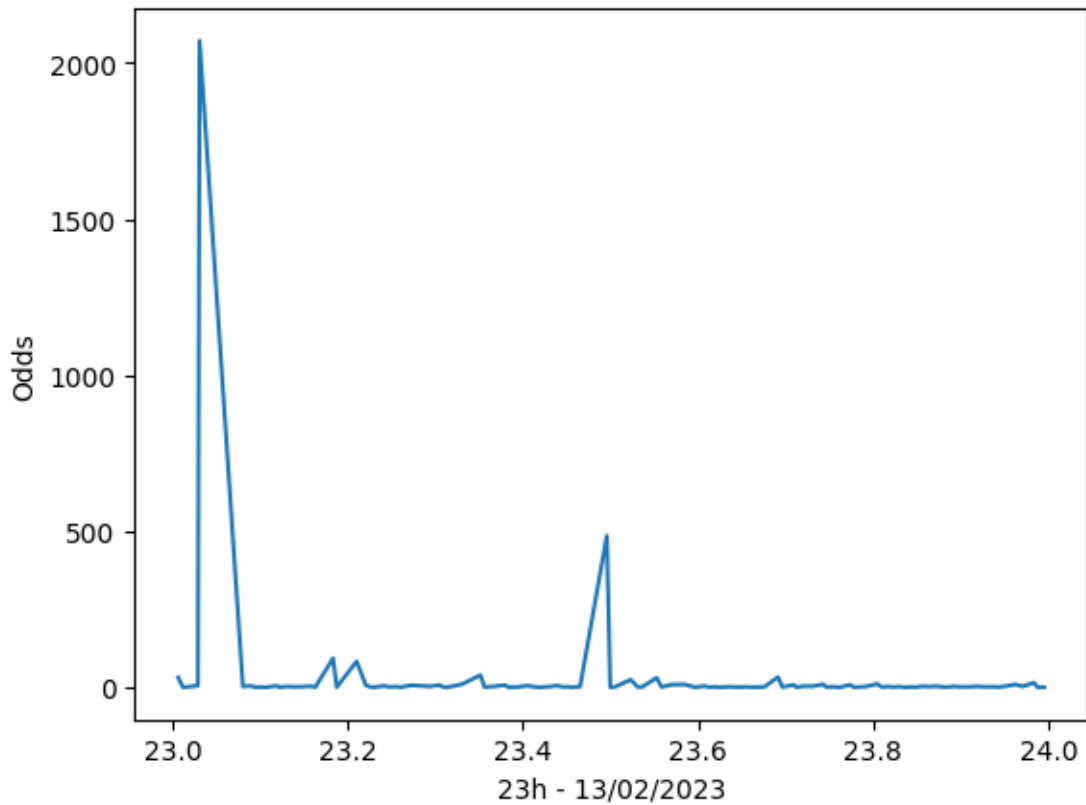
```
[ ]: X13 = data1[data1['hour'] == 22]
plt.plot(np.array(X13['hour_edi']), np.array(X13['Odds']))
plt.xlabel("22h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 22h - Geral: ', len(X13['Odds']), '\n',
"Media >= 1.29: ", len(X13[X13['Odds'] >= 1.29])/len(X13['Odds']), '\n',
"Media >= 1.40: ", len(X13[X13['Odds'] >= 1.40])/len(X13['Odds']), '\n',
"Media >= 1.45: ", len(X13[X13['Odds'] >= 1.45])/len(X13['Odds']), '\n',
"Media >= 1.61: ", len(X13[X13['Odds'] >= 1.65])/len(X13['Odds']), '\n')
```

```
Hora 22h - Geral: 126
Media >= 1.29: 0.753968253968254
Media >= 1.40: 0.6984126984126984
Media >= 1.45: 0.6666666666666666
Media >= 1.61: 0.6428571428571429
```

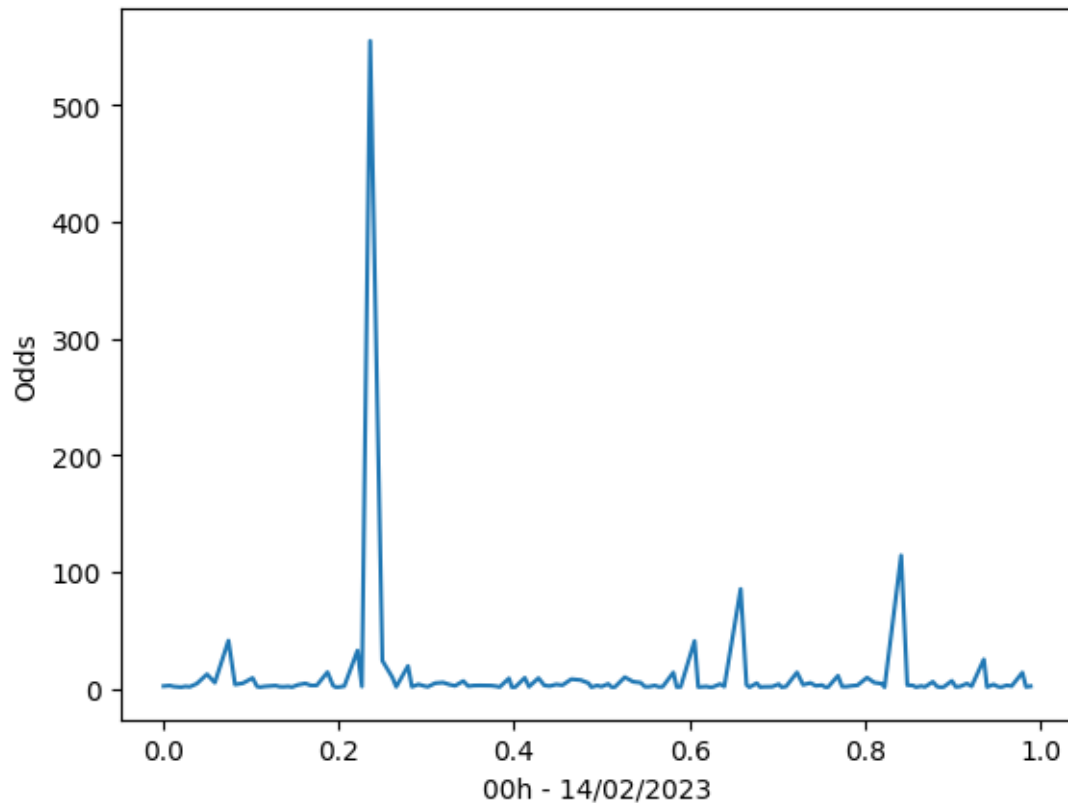
```
[ ]: X14 = data1[data1['hour'] == 23]
plt.plot(np.array(X14['hour_edi']), np.array(X14['Odds']))
plt.xlabel("23h - 13/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 23h - Geral: ', len(X14['Odds']), '\n',
"Media >= 1.29: ", len(X14[X14['Odds'] >= 1.29])/len(X14['Odds']), '\n',
"Media >= 1.40: ", len(X14[X14['Odds'] >= 1.40])/len(X14['Odds']), '\n',
"Media >= 1.45: ", len(X14[X14['Odds'] >= 1.45])/len(X14['Odds']), '\n',
"Media >= 1.61: ", len(X14[X14['Odds'] >= 1.65])/len(X14['Odds']), '\n')
```

```
Hora 23h - Geral: 122
Media >= 1.29: 0.7459016393442623
Media >= 1.40: 0.680327868852459
Media >= 1.45: 0.6721311475409836
Media >= 1.61: 0.6147540983606558
```

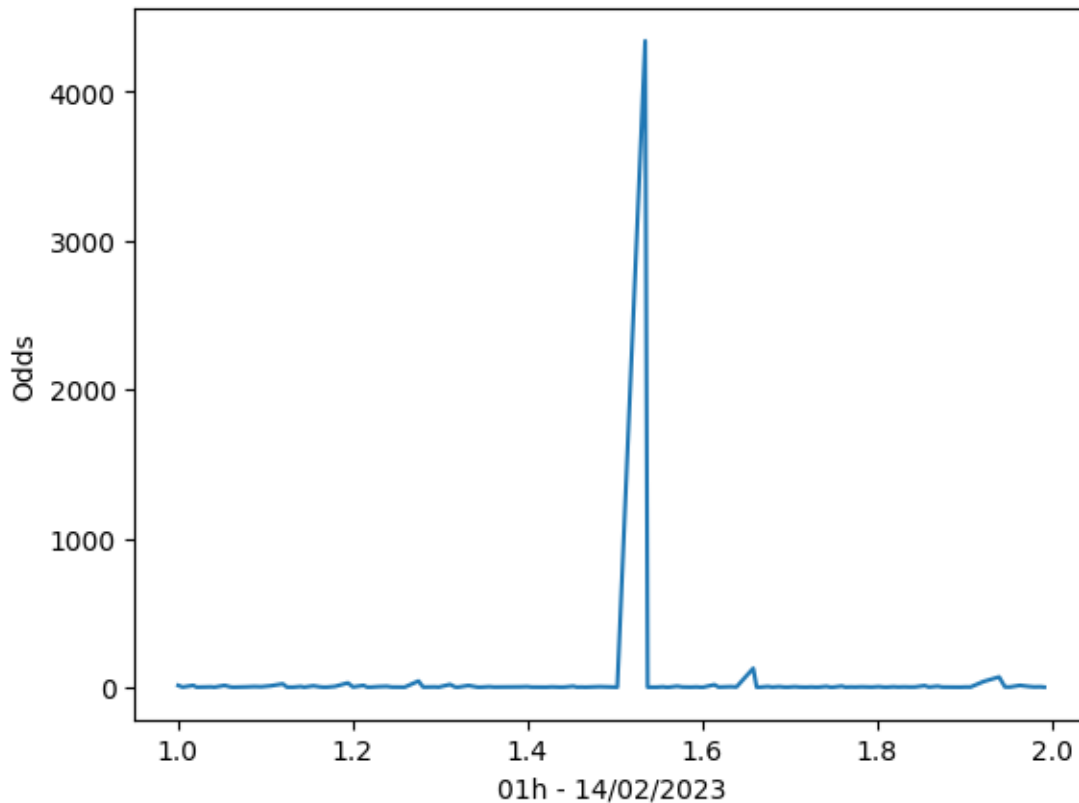
```
[ ]: X15 = data2[data2['hour'] == 0]
plt.plot(np.array(X15['hour_edi']), np.array(X15['Odds']))
plt.xlabel("00h - 14/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 00h - Geral: ', len(X15['Odds']), '\n',
"Media >= 1.29: ", len(X15[X15['Odds'] >= 1.29])/len(X15['Odds']), '\n',
"Media >= 1.40: ", len(X15[X15['Odds'] >= 1.40])/len(X15['Odds']), '\n',
"Media >= 1.45: ", len(X15[X15['Odds'] >= 1.45])/len(X15['Odds']), '\n',
"Media >= 1.61: ", len(X15[X15['Odds'] >= 1.65])/len(X15['Odds']), '\n')
```

```
Hora 00h - Geral: 145
Media >= 1.29: 0.7931034482758621
Media >= 1.40: 0.7241379310344828
Media >= 1.45: 0.6896551724137931
Media >= 1.61: 0.6
```

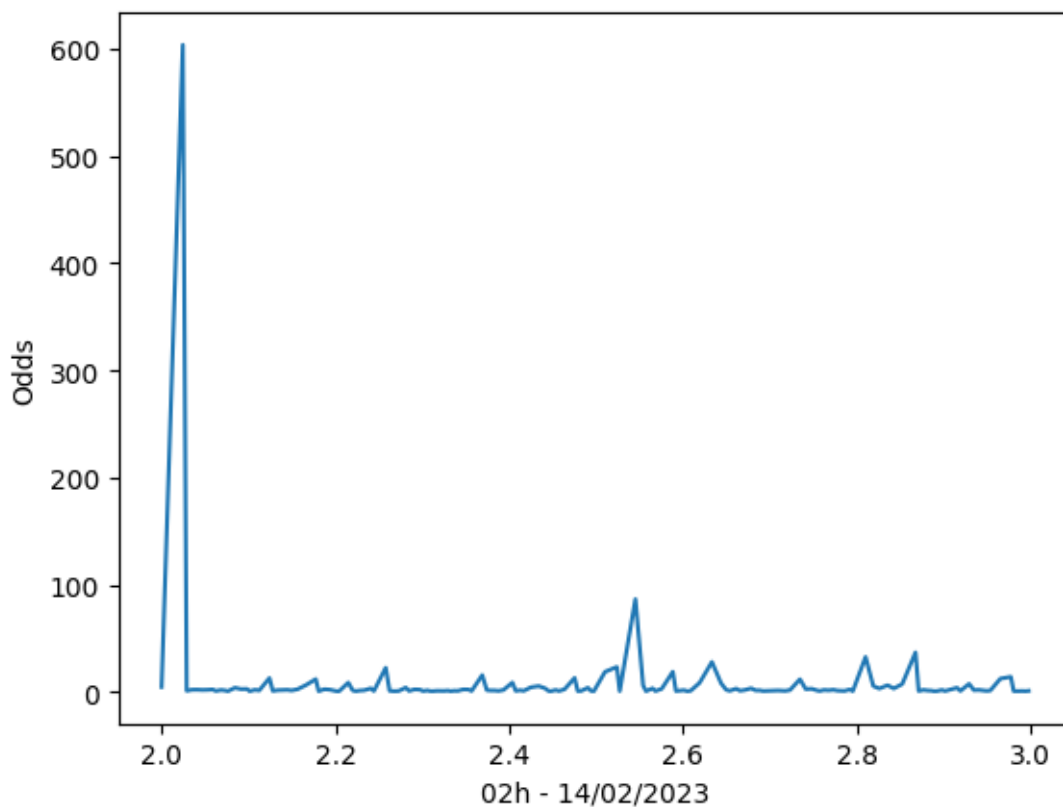
```
[ ]: X16 = data2[data2['hour'] == 1]
plt.plot(np.array(X16['hour_edi']), np.array(X16['Odds']))
plt.xlabel("01h - 14/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 01h - Geral: ', len(X16['Odds']), '\n',
"Media >= 1.29: ", len(X16[X16['Odds'] >= 1.29])/len(X16['Odds']), '\n',
"Media >= 1.40: ", len(X16[X16['Odds'] >= 1.40])/len(X16['Odds']), '\n',
"Media >= 1.45: ", len(X16[X16['Odds'] >= 1.45])/len(X16['Odds']), '\n',
"Media >= 1.61: ", len(X16[X16['Odds'] >= 1.65])/len(X16['Odds']), '\n')
```

```
Hora 01h - Geral: 153
Media >= 1.29: 0.7581699346405228
Media >= 1.40: 0.6666666666666666
Media >= 1.45: 0.6470588235294118
Media >= 1.61: 0.5947712418300654
```

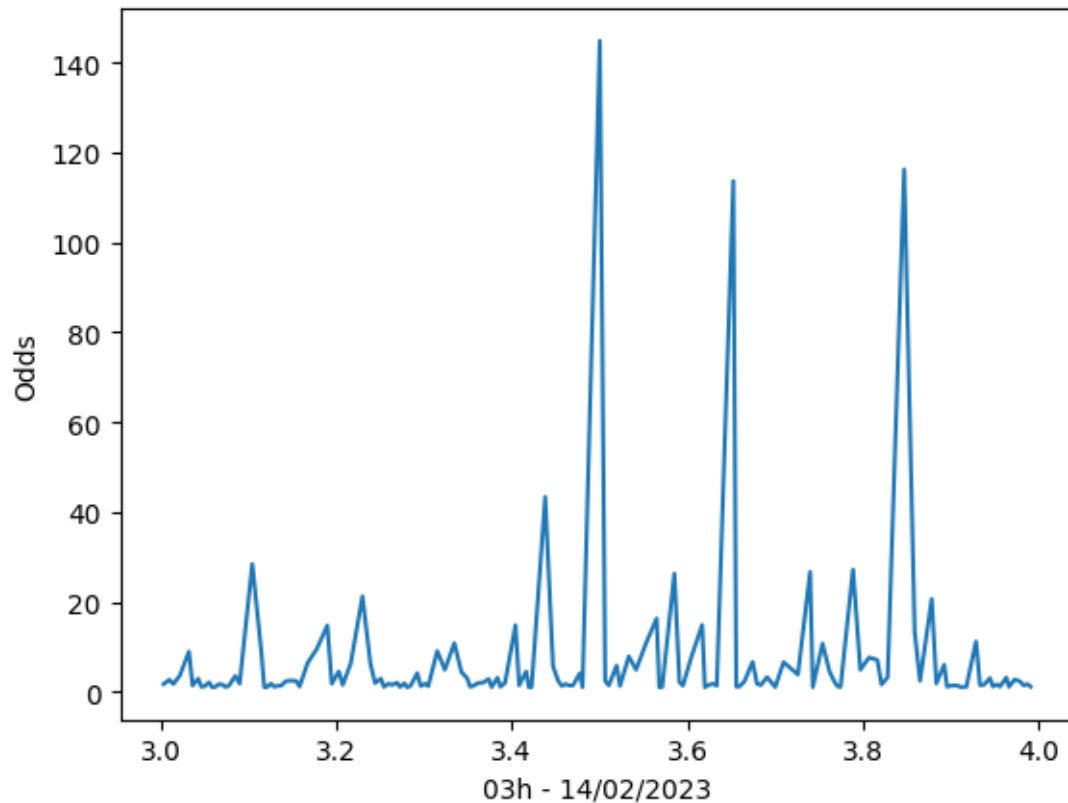
```
[ ]: X17 = data2[data2['hour'] == 2]
plt.plot(np.array(X17['hour_edi']), np.array(X17['Odds']))
plt.xlabel("02h - 14/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 02h - Geral: ', len(X17['Odds']), '\n',
"Media >= 1.29: ", len(X17[X17['Odds'] >= 1.29])/len(X17['Odds']), '\n',
"Media >= 1.40: ", len(X17[X17['Odds'] >= 1.40])/len(X17['Odds']), '\n',
"Media >= 1.45: ", len(X17[X17['Odds'] >= 1.45])/len(X17['Odds']), '\n',
"Media >= 1.61: ", len(X17[X17['Odds'] >= 1.65])/len(X17['Odds']), '\n')
```

```
Hora 02h - Geral: 166
Media >= 1.29: 0.7228915662650602
Media >= 1.40: 0.6506024096385542
Media >= 1.45: 0.6204819277108434
Media >= 1.61: 0.5602409638554217
```

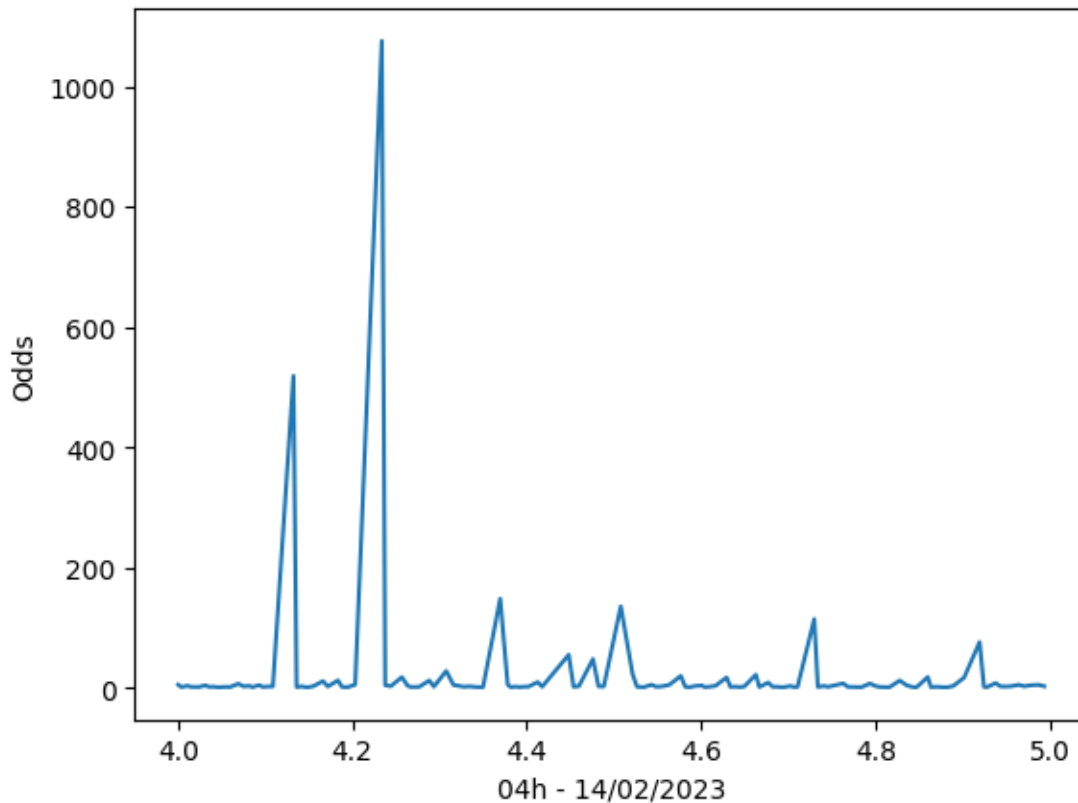
```
[ ]: X18 = data2[data2['hour'] == 3]
plt.plot(np.array(X18['hour_edi']), np.array(X18['Odds']))
plt.xlabel("03h - 14/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 03h - Geral: ', len(X18['Odds']), '\n',
"Media >= 1.29: ", len(X18[X18['Odds'] >= 1.29])/len(X18['Odds']), '\n',
"Media >= 1.40: ", len(X18[X18['Odds'] >= 1.40])/len(X18['Odds']), '\n',
"Media >= 1.45: ", len(X18[X18['Odds'] >= 1.45])/len(X18['Odds']), '\n',
"Media >= 1.61: ", len(X18[X18['Odds'] >= 1.65])/len(X18['Odds']), '\n')
```

```
Hora 03h - Geral: 154
Media >= 1.29: 0.7467532467532467
Media >= 1.40: 0.6688311688311688
Media >= 1.45: 0.6428571428571429
Media >= 1.61: 0.5844155844155844
```

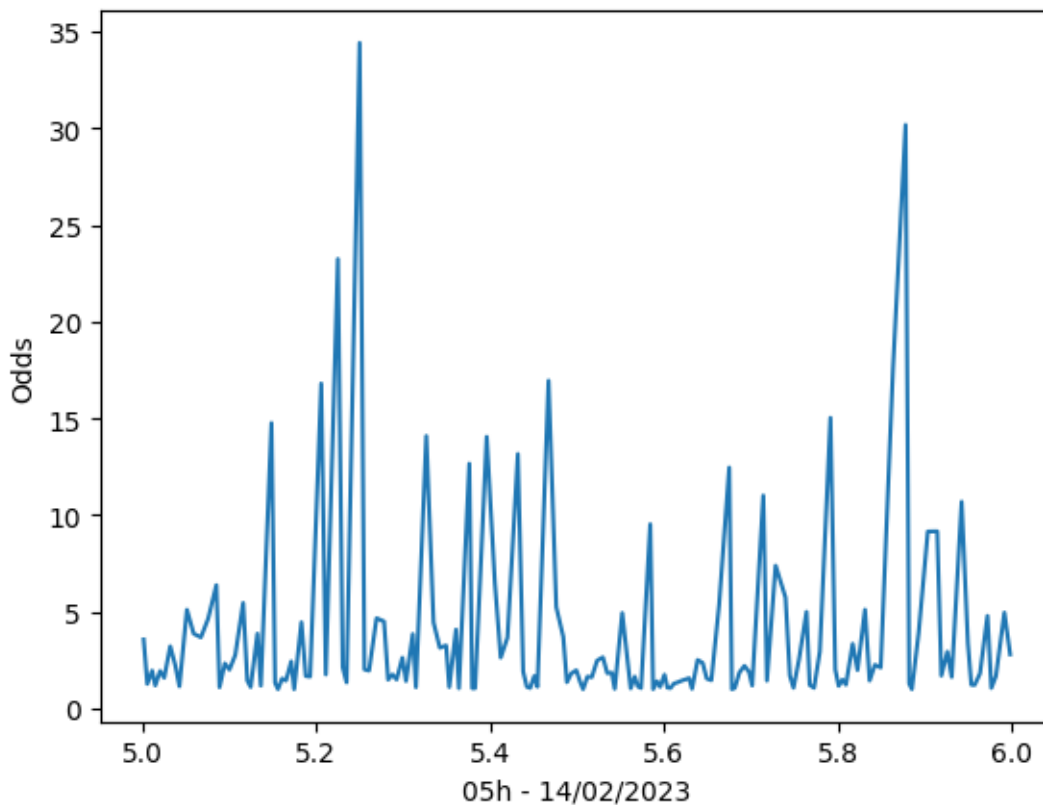
```
[ ]: X19 = data2[data2['hour'] == 4]
plt.plot(np.array(X19['hour_edi']), np.array(X19['Odds']))
plt.xlabel("04h - 14/02/2023")
plt.ylabel("Odds")
plt.show()
```

```
[ ]: print('Hora 04h - Geral: ', len(X19['Odds']), '\n',
"Media >= 1.29: ", len(X19[X19['Odds'] >= 1.29])/len(X19['Odds']), '\n',
"Media >= 1.40: ", len(X19[X19['Odds'] >= 1.40])/len(X19['Odds']), '\n',
"Media >= 1.45: ", len(X19[X19['Odds'] >= 1.45])/len(X19['Odds']), '\n',
"Media >= 1.61: ", len(X19[X19['Odds'] >= 1.65])/len(X19['Odds']), '\n')
```

```
Hora 04h - Geral: 145
Media >= 1.29: 0.7655172413793103
Media >= 1.40: 0.7172413793103448
Media >= 1.45: 0.6896551724137931
Media >= 1.61: 0.6206896551724138
```

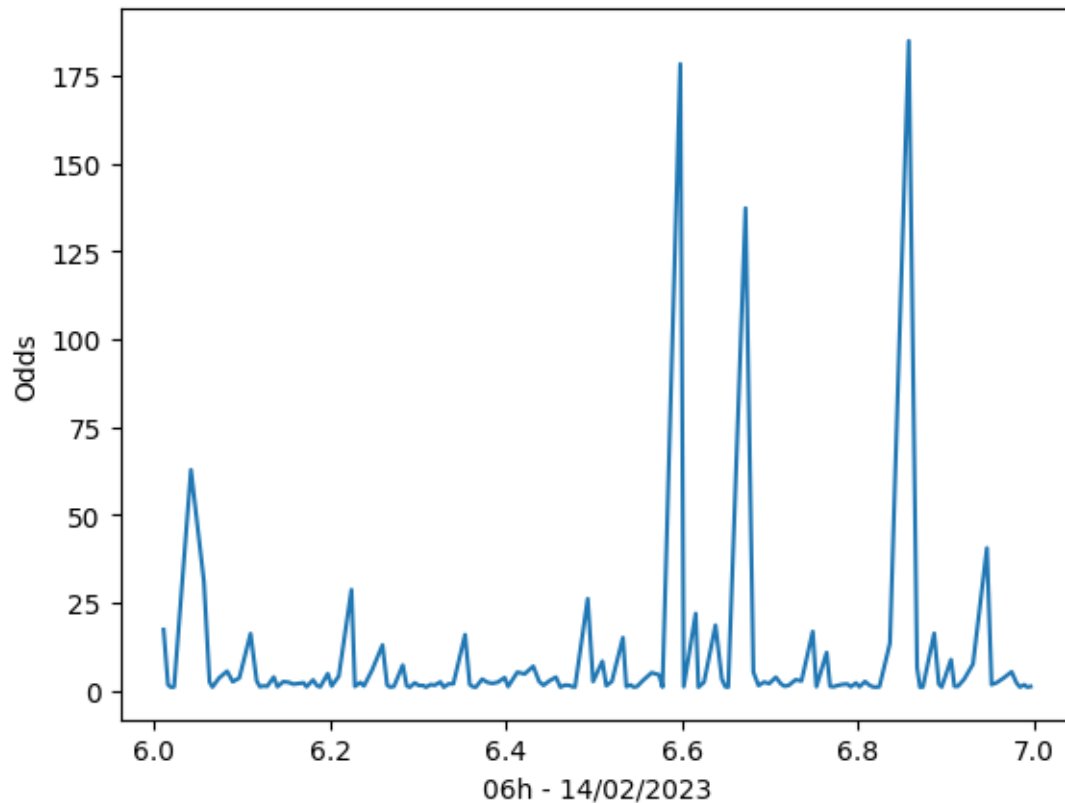
```
[ ]: X20 = data2[data2['hour'] == 5]
plt.plot(np.array(X20['hour_edi']), np.array(X20['Odds']))
plt.xlabel("05h - 14/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 5h - Geral: ', len(X20['Odds']), '\n',
"Media >= 1.29: ", len(X20[X20['Odds'] >= 1.29])/len(X20['Odds']), '\n',
"Media >= 1.40: ", len(X20[X20['Odds'] >= 1.40])/len(X20['Odds']), '\n',
"Media >= 1.45: ", len(X20[X20['Odds'] >= 1.45])/len(X20['Odds']), '\n',
"Media >= 1.61: ", len(X20[X20['Odds'] >= 1.65])/len(X20['Odds']), '\n')
```

```
Hora 5h - Geral: 158
Media >= 1.29: 0.759493670886076
Media >= 1.40: 0.7151898734177216
Media >= 1.45: 0.6772151898734177
Media >= 1.61: 0.6012658227848101
```

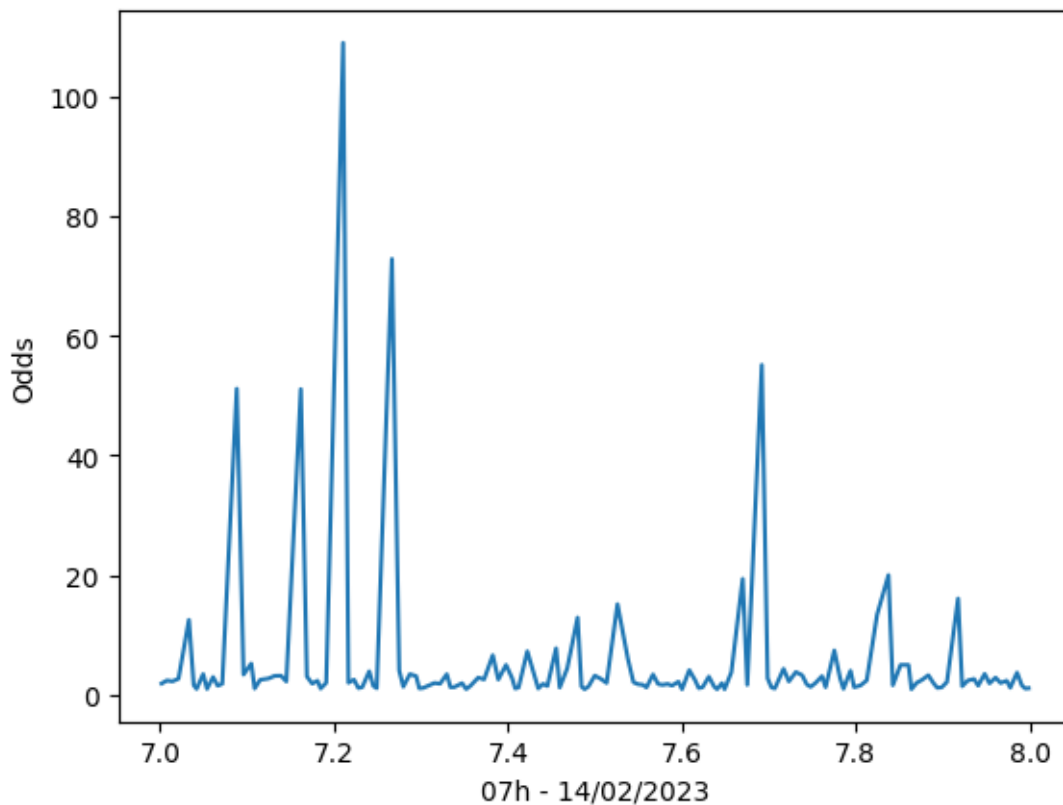
```
[ ]: X21 = data2[data2['hour'] == 6]
plt.plot(np.array(X21['hour_edi']), np.array(X21['Odds']))
plt.xlabel("06h - 14/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 6h - Geral: ', len(X21['Odds']), '\n',
"Media >= 1.29: ", len(X21[X21['Odds'] >= 1.29])/len(X21['Odds']), '\n',
"Media >= 1.40: ", len(X21[X21['Odds'] >= 1.40])/len(X21['Odds']), '\n',
"Media >= 1.45: ", len(X21[X21['Odds'] >= 1.45])/len(X21['Odds']), '\n',
"Media >= 1.61: ", len(X21[X21['Odds'] >= 1.65])/len(X21['Odds']), '\n')
```

```
Hora 6h - Geral: 148
Media >= 1.29: 0.6959459459459459
Media >= 1.40: 0.6756756756756757
Media >= 1.45: 0.6554054054054054
Media >= 1.61: 0.5743243243243243
```

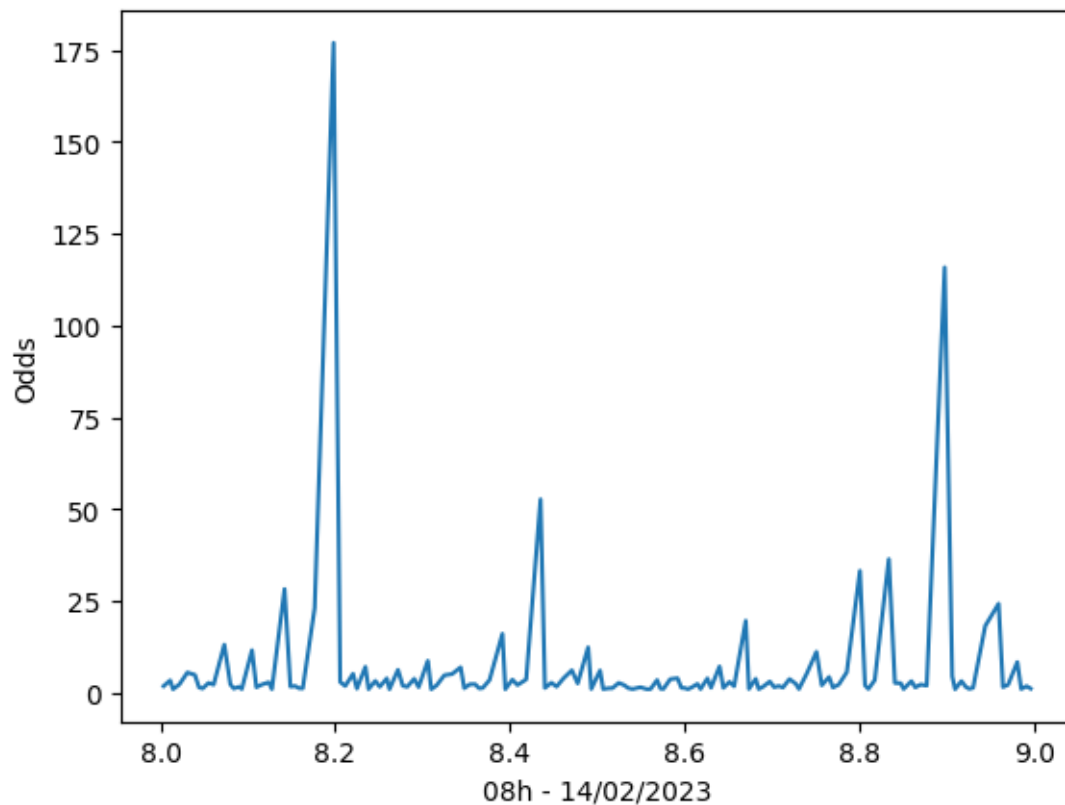
```
[ ]: X22 = data2[data2['hour'] == 7]
plt.plot(np.array(X22['hour_edi']), np.array(X22['Odds']))
plt.xlabel("07h - 14/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 7h - Geral: ', len(X22['Odds']), '\n',
"Media >= 1.29: ", len(X22[X22['Odds'] >= 1.29])/len(X22['Odds']), '\n',
"Media >= 1.40: ", len(X22[X22['Odds'] >= 1.40])/len(X22['Odds']), '\n',
"Media >= 1.45: ", len(X22[X22['Odds'] >= 1.45])/len(X22['Odds']), '\n',
"Media >= 1.61: ", len(X22[X22['Odds'] >= 1.65])/len(X22['Odds']), '\n')
```

```
Hora 7h - Geral: 147
Media >= 1.29: 0.8367346938775511
Media >= 1.40: 0.7619047619047619
Media >= 1.45: 0.7482993197278912
Media >= 1.61: 0.673469387755102
```

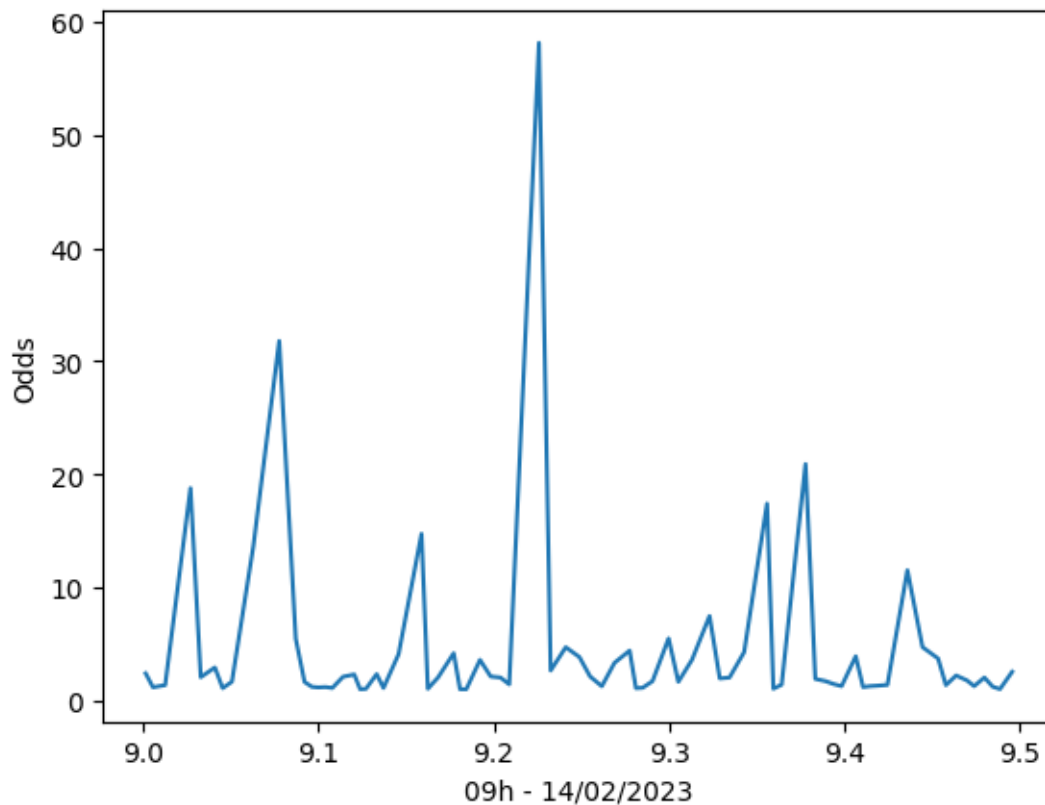
```
[ ]: X23 = data2[data2['hour'] == 8]
plt.plot(np.array(X23['hour_edi']), np.array(X23['Odds']))
plt.xlabel("08h - 14/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 8h - Geral: ', len(X23['Odds']), '\n',
"Media >= 1.29: ", len(X23[X23['Odds'] >= 1.29])/len(X23['Odds']), '\n',
"Media >= 1.40: ", len(X23[X23['Odds'] >= 1.40])/len(X23['Odds']), '\n',
"Media >= 1.45: ", len(X23[X23['Odds'] >= 1.45])/len(X23['Odds']), '\n',
"Media >= 1.61: ", len(X23[X23['Odds'] >= 1.65])/len(X23['Odds']), '\n')
```

```
Hora 8h - Geral: 144
Media >= 1.29: 0.7569444444444444
Media >= 1.40: 0.7013888888888888
Media >= 1.45: 0.6944444444444444
Media >= 1.61: 0.6041666666666666
```

```
[ ]: X24 = data2[data2['hour'] == 9]
plt.plot(np.array(X24['hour_edi']), np.array(X24['Odds']))
plt.xlabel("09h - 14/02/2023")
plt.ylabel("Odds")
plt.show()
```



```
[ ]: print('Hora 9h - Geral: ', len(X24['Odds']), '\n',
"Media >= 1.29: ", len(X24[X24['Odds'] >= 1.29])/len(X24['Odds']), '\n',
"Media >= 1.40: ", len(X24[X24['Odds'] >= 1.40])/len(X24['Odds']), '\n',
"Media >= 1.45: ", len(X24[X24['Odds'] >= 1.45])/len(X24['Odds']), '\n',
"Media >= 1.61: ", len(X24[X24['Odds'] >= 1.65])/len(X24['Odds']), '\n')
```

```
Hora 9h - Geral: 75
Media >= 1.29: 0.7066666666666667
Media >= 1.40: 0.6533333333333333
Media >= 1.45: 0.6266666666666667
Media >= 1.61: 0.6
```