Untitled

January 19, 2021

[348]:
```
import tkinter
import random
import pandas as pd
import numpy as np
import os
import openpyxl
import matplotlib.pyplot as plt
#
```

[349]:
```
currentPath = os.getcwd()
print(currentPath)
```

```
C:\Users\sel20
```

[350]:
```
data_pd = pd.read_excel('./Desktop/python/excel1.xlsx')
data = pd.DataFrame(data_pd)
data_np = pd.DataFrame.to_numpy(data_pd)
```

[351]:
```
display(data_np)
display(data)
#
```

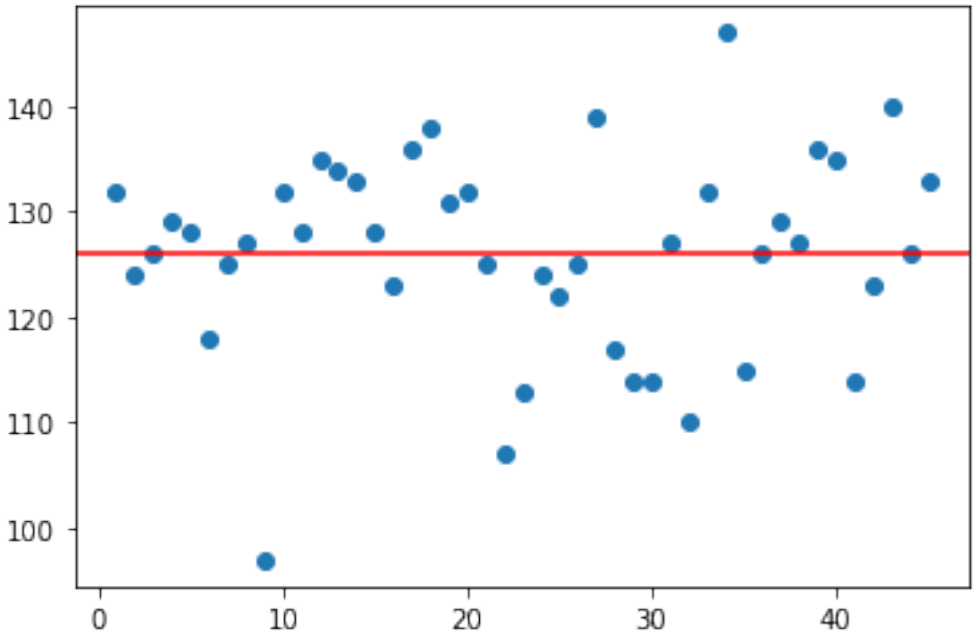
```
array([[' ', ' ', '  ', ..., nan, nan, nan],
       [nan, nan, nan, ..., 5.0, 6.0, '  '],
       [2021, 946, '2021.01.16', ..., 34.0, 40.0, 20],
       ...,
       [nan, 3, '2002.12.21', ..., 27.0, 31.0, 30],
       [nan, 2, '2002.12.14', ..., 32.0, 42.0, 2],
       [nan, 1, '2002.12.07', ..., 37.0, 40.0, 16]], dtype=object)
```

	Unnamed: 1	Unnamed: 2	Unnamed: 3		Unnamed: 4	Unnamed: 5	\
0				1	NaN	2	
1	NaN	NaN	NaN				
2	2021	946	2021.01.16	11	2,157,656,182	71	
3	NaN	945	2021.01.09	13	1,765,554,491	71	
4	NaN	944	2021.01.02	13	1,961,836,356	79	
..	...	...	...	...	...	...	

```
943      NaN          5  2003.01.04          0              0          0
944     2002          4  2002.12.28          0              0          1
945      NaN          3  2002.12.21          1  2,000,000,000          0
946      NaN          2  2002.12.14          1  2,002,006,800          2
947      NaN          1  2002.12.07          0              0          1

       Unnamed: 6 Unnamed: 7  Unnamed: 8 Unnamed: 9 Unnamed: 10 Unnamed: 11  \
0             NaN          3         NaN          4         NaN          5
1
2     55,714,127        2949  1,341,371      138433     50,000      2224563
3     53,878,424        2490  1,536,293      124224     50,000      2120882
4     53,805,639        3057  1,390,464      147665     50,000      2440455
..           ...         ...         ...         ...         ...         ...
943            0          42  6,033,800        3043    166,500        60434
944  211,191,200          29  7,282,400        2777    152,100        52382
945            0         139  1,174,100        5940     54,900        73256
946   94,866,800         103  1,842,000        3763    100,800        55480
947  143,934,100          28  5,140,500        2537    113,400        40155

    Unnamed: 12 Unnamed: 13  Unnamed: 14  Unnamed: 15  Unnamed: 16  \
0           NaN                      NaN          NaN          NaN
1                      1.0          2.0          3.0          4.0
2         5,000           9         18.0         19.0         30.0
3         5,000           9         10.0         15.0         30.0
4         5,000           2         13.0         16.0         19.0
..          ...         ...          ...          ...          ...
943      10,000          16         24.0         29.0         40.0
944      10,000          14         27.0         30.0         31.0
945      10,000          11         16.0         19.0         21.0
946      10,000           9         13.0         21.0         25.0
947      10,000          10         23.0         29.0         33.0

     Unnamed: 17  Unnamed: 18 Unnamed: 19
0            NaN          NaN         NaN
1            5.0          6.0
2           34.0         40.0          20
3           33.0         37.0          26
4           32.0         33.0          42
..           ...          ...         ...
943         41.0         42.0           3
944         40.0         42.0           2
945         27.0         31.0          30
946         32.0         42.0           2
947         37.0         40.0          16

[948 rows x 20 columns]
```

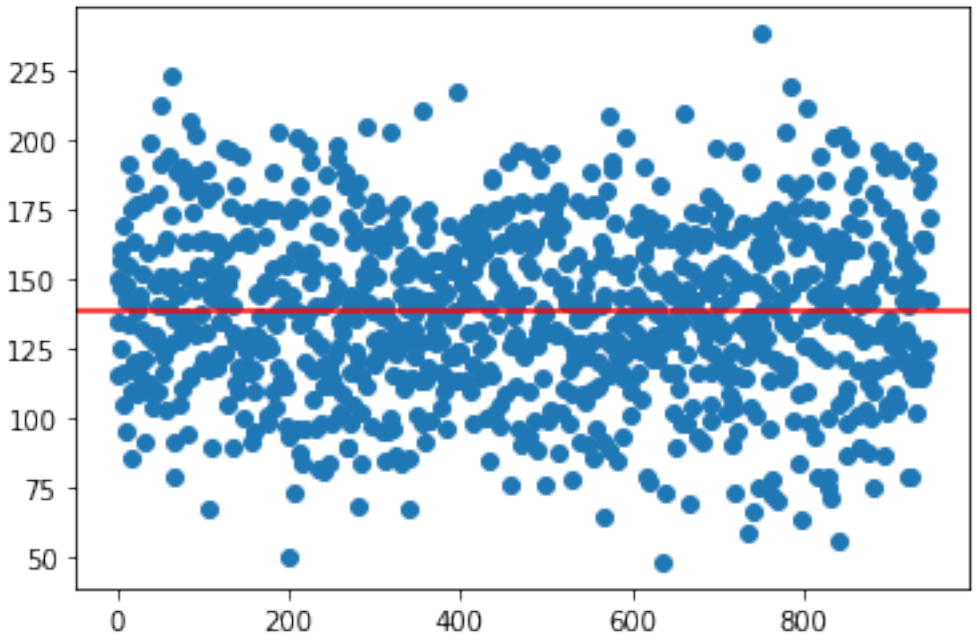
[352]:
```
data_2 = data.iloc[2:,13:19]
data_2_np = pd.DataFrame.to_numpy(data_2)
#
```

[357]:
```
k = [0 for i in range(1,46)]
a = [i for i in range(1,46)]

for i in range(6) :
    for j in range(len(data_2_np)) :
        for c in range(len(k)) :
            if data_2_np[j][i] == a[c] : k[c] +=1
#for   1        2

g = len(data_2_np)*6/45

plt.scatter(a,k)
plt.axhline(y = int(g), color = 'r')
plt.show()
#
#



qwe = []
rtz = []
for i in range(len(k)):
    if k[i] < g : qwe.append(i+1)
#
for i in range(len(k)):
    if k[i] > g : rtz.append(i+1)
#




#           170
er = []
for j in range(len(data_2_np)):
        er.append(sum(data_2_np[j]))
average_sum = sum(er)/len(data_2_np)
print(average_sum)
x = [i for i in range(len(data_2_np))]

plt.scatter(x,er)
plt.axhline(y = average_sum, color = 'r')
#                  ..
```




```
138.29175475687103
```

[357]: `<matplotlib.lines.Line2D at 0x22f829d5e08>`



[354]:
```
window = tkinter.Tk()
window.title("Lotto")
window.geometry("640x400+100+100")
window.resizable(False, False)
#

global label
Ergebnis = [0,0,0,0,0,0]
#             6
def lotto_random():
    lottonumber = sorted(random.sample(range(1,46),6))
    label.configure(text = lottonumber)
#          6
def lotto_random2():
    lottonumber2 = sorted(random.sample(qwe,6))
    label.configure(text = lottonumber2)
#          6
def lotto_random3():
    lottonumber3 = sorted(random.sample(rtz,6))
    label.configure(text = lottonumber3)

label = tkinter.Label(window, text = Ergebnis)
label.pack()
#
button  = tkinter.Button(window,text = 'random', overrelief = "solid",width =␣
↪15, command = lotto_random, repeatdelay = 1000, repeatinterval = 100)
button.pack()

button2 = tkinter.Button(window,text = 'prediction1', overrelief =␣
↪"solid",width = 15, command = lotto_random2)
button2.pack()

button3 = tkinter.Button(window,text = 'prediction2', overrelief =␣
↪"solid",width = 15, command = lotto_random3)
button3.pack()

window.mainloop()
```

[ ]: