

```
In [2]: #General
import numpy as np

import pandas as pd

from numpy.random import randn

from pandas import Series, DataFrame

#Stats
from scipy import stats

#Plots
import matplotlib as mpl

import matplotlib.pyplot as plt

import seaborn as sns

%matplotlib inline
```

```
In [35]: data=randn(100)
         print(data)
```

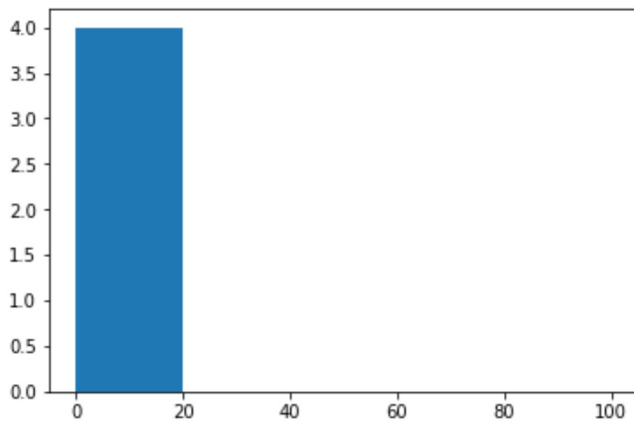
```
[[-0.57072787 -3.10161644 0.07646296]
 [-0.59086492 -1.98252252 -0.2179377 ]
 [-0.43777425 -0.10623087 0.90582883]
 [-1.42040214 0.97094289 1.29074709]
 [-0.9028259 -0.23773605 -0.07882634]
 [-1.7726931 -0.27023094 0.42068534]
 [-1.26096647 0.89190076 -1.03507562]
 [-0.45284801 0.26107659 -0.09078699]
 [-1.09667485 0.09260312 -0.12785044]
 [ 0.97092747 0.36792395 -0.64382585]
 [-0.49743856 1.44346301 0.75464688]
 [-0.08227526 0.1729448 -0.64728305]
 [-0.13413089 0.33063054 0.2889791 ]
 [-0.91847787 -0.64327701 0.03024083]
 [-0.5340413 -0.00444787 0.52325426]
 [-0.53407405 1.24688557 -0.08971982]
 [ 0.60100981 0.40523248 -0.43977326]
 [ 0.5388827 0.48762644 0.15825393]
 [-1.13809373 0.9083583 1.76383631]
 [-0.48066504 -2.21264418 -0.46559945]
 [-0.53821311 -1.11195618 -1.39653273]
 [-0.41975589 -0.60668176 1.57537778]
 [-0.64759052 0.89494282 -0.70503932]
 [ 0.83118098 -0.334016 -0.58467905]
 [ 0.80210668 -2.07812629 0.7071793 ]
 [ 0.79901003 -0.662141 1.41701936]
 [-1.68203073 -1.60200129 -1.0092832 ]
 [ 2.53244076 1.2947867 -0.03725728]
 [ 0.62417683 0.75688338 -0.56103565]
 [-0.35814077 1.1849432 -0.2601571 ]
 [-1.51888212 -1.14437533 -0.61595615]
 [ 0.10990529 -0.21008724 -0.94276805]
 [ 0.39122005 -0.53135136 2.18874727]
 [ 1.43903666 0.73190022 -1.1249698 ]
 [ 1.94002166 -0.98719785 -0.9590361 ]
 [ 1.66658466 -0.34951479 -0.27512935]
 [ 1.11910111 -0.3982611 0.65981074]
 [-1.04799354 0.52167293 0.88352737]
 [ 1.9379047 1.6147019 -0.51457187]
 [-1.15468007 -0.28470576 -0.67698586]
 [-1.84304426 -0.45096893 0.91546654]
 [ 0.25679448 0.65201317 1.02376992]
 [ 0.67048913 -1.48647795 0.04742772]
 [-1.14262642 0.59461234 -0.37794196]
 [ 0.72421053 -1.54392844 0.14197039]
 [ 0.13471403 0.72918618 1.13022665]
 [-0.19583541 -0.63623059 -0.6734463 ]
 [-0.36228917 -0.42076943 -0.72645356]
 [-0.09026621 -1.03866672 0.56505135]
 [ 0.29701324 0.49864241 1.10263185]
 [-0.81728238 0.70017579 0.31109979]
 [ 0.32112755 -1.09427061 0.01386319]
 [ 0.56762131 -1.18466712 0.30046959]
 [ 1.45844016 1.08359202 1.77080727]
 [ 0.2936568 -0.29295853 -1.5319998 ]
 [-0.58068076 -0.09406412 -0.26691498]
 [ 0.55084217 2.14867042 -1.24083272]
 [-1.05735665 -1.84209842 -1.11794645]
 [-0.2598976 0.21389772 -0.8405154 ]
 [-0.05092963 -1.18370339 0.67078948]
 [-0.64989181 -0.14626033 0.30744291]
 [-1.92017899 0.12552649 -0.06841931]
 [ 0.49123725 -0.23876527 0.00773375]
 [-0.62939981 0.23872034 0.21310734]
```

```
In [30]: x_min=data.min()-1
x_max=data.max()+1

x_axis=np.linspace(x_min,x_max,5)
y_axis=np.linspace(x_min,x_max,5)

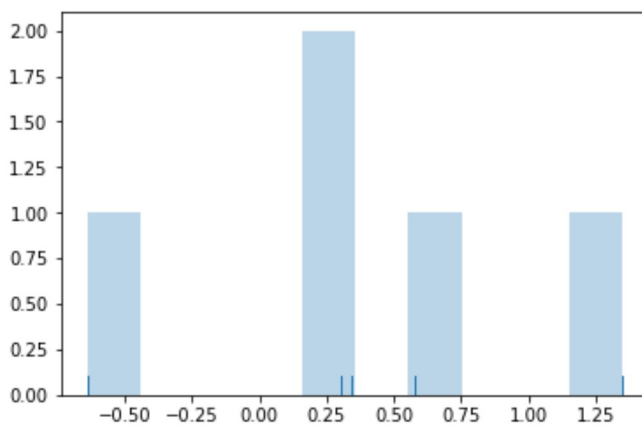
plt.hist(data,bins=5,range=(0,100))
```

```
Out[30]: (array([4., 0., 0., 0., 0.]),
array([ 0., 20., 40., 60., 80., 100.]),
<a list of 5 Patch objects>)
```



```
In [20]: plt.hist(data,alpha=0.3)
sns.rugplot(data)
#This is calculating the hight of the bin based on number of tickss in it.
```

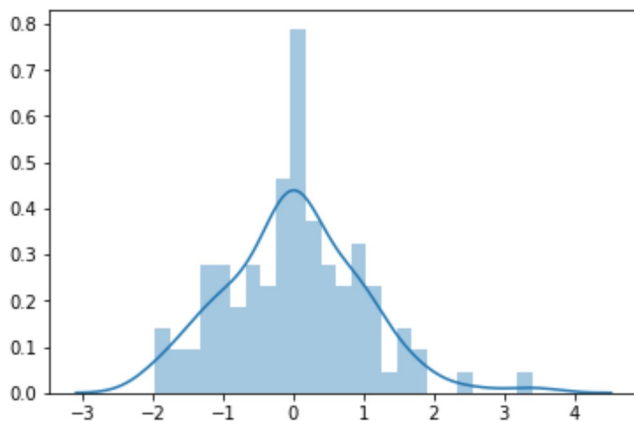
```
Out[20]: <matplotlib.axes._subplots.AxesSubplot at 0x1ca22362e80>
```



```
In [33]: sns.distplot(data,bins=25)
```

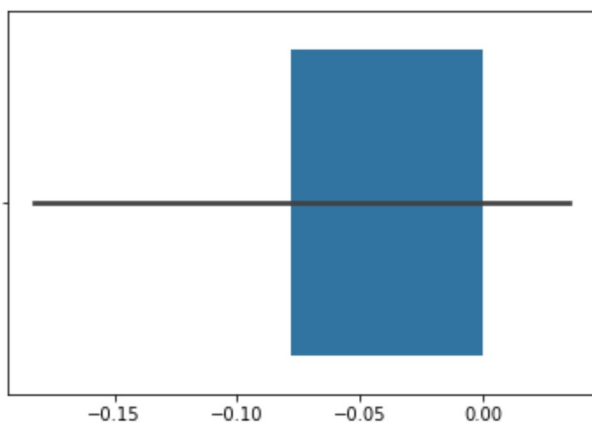
C:\Users\acpimpar\Anaconda3\lib\site-packages\matplotlib\axes_axes.py:6462: UserWarning: The 'normed' kwarg is deprecated, and has been replaced by the 'density' kwarg.
warnings.warn("The 'normed' kwarg is deprecated, and has been "

```
Out[33]: <matplotlib.axes._subplots.AxesSubplot at 0x1ca22689ba8>
```



```
In [46]: sns.barplot(data)
```

```
Out[46]: <matplotlib.axes._subplots.AxesSubplot at 0x1ca22868908>
```



```
In [8]: import numpy as np
import pandas as pd

from pandas import Series, DataFrame
from numpy.random import randn

from scipy import stats

import seaborn as sns

import matplotlib as mpl

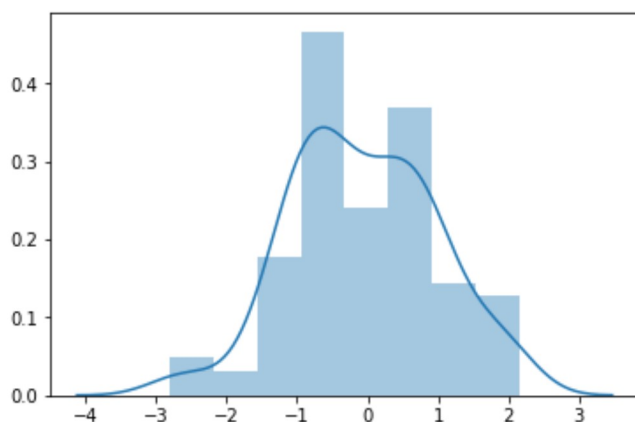
import matplotlib.pyplot as plt

%matplotlib inline
```

```
In [9]: data=randn(100)
```

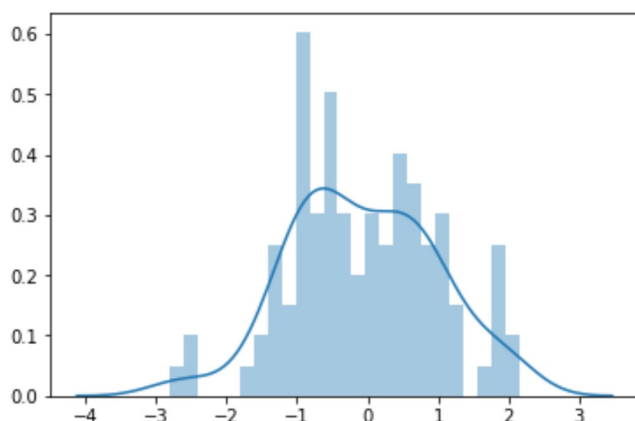
```
In [11]: p=sns.distplot(data)
```

```
C:\Users\acpimpar\Anaconda3\lib\site-packages\matplotlib\axes\_axes.py:6462: Use
rWarning: The 'normed' kwarg is deprecated, and has been replaced by the 'densit
y' kwarg.
  warnings.warn("The 'normed' kwarg is deprecated, and has been "
```



```
In [14]: p=sns.distplot(data,bins=25,rug=False,hist=True)
```

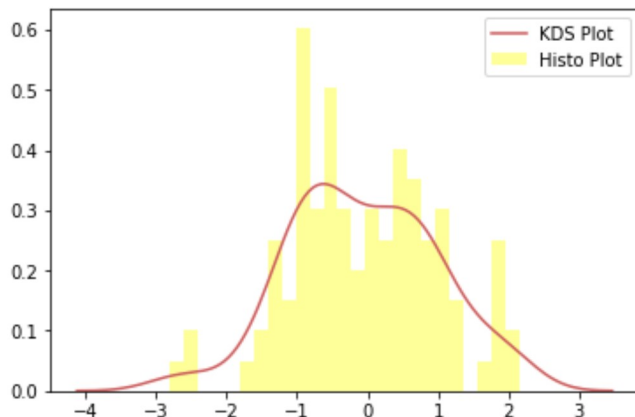
```
C:\Users\acpimpar\Anaconda3\lib\site-packages\matplotlib\axes\_axes.py:6462: Use
rWarning: The 'normed' kwarg is deprecated, and has been replaced by the 'densit
y' kwarg.
  warnings.warn("The 'normed' kwarg is deprecated, and has been "
```



```
In [20]: x=sns.distplot(data,bins=25,  
                      kde_kws={'color':'indianred','label':'KDS Plot'},  
                      hist_kws={'color':'yellow','label':'Histo Plot'})
```

C:\Users\acpimpar\Anaconda3\lib\site-packages\matplotlib\axes_axes.py:6462: UserWarning: The 'normed' kwarg is deprecated, and has been replaced by the 'density' kwarg.

warnings.warn("The 'normed' kwarg is deprecated, and has been "



```
In [22]: data1=randn(5)
```

```
In [23]: data1
```

```
Out[23]: array([-1.78191456, -1.03649636, -0.16703549, -1.27202127,  1.05850085])
```

```
In [32]: sns.violinplot(data1,color='yellow',inner='quartile')
```

```
Out[32]: <matplotlib.axes._subplots.AxesSubplot at 0x1b4c32ac278>
```

