In [54]: import pandas as pd import numpy as np import numpy as np import numpy as np import seaborn as sns  In [55]: file =pd.read_csv("abalone.csv")  In [56]: file  Out[56]: Sex Length Diameter Height Wholeweight Shucked weight Viscera weight Shell weight Rings  1 M 0.455 0.365 0.365 0.095 0.5140 0.2245 0.1010 0.1500 15  1 M 0.350 0.265 0.090 0.2255 0.099 0.0485 0.0700 7
2 F 0.530 0.420 0.135 0.6770 0.2565 0.1415 0.2100 9  3 M 0.440 0.365 0.125 0.5160 0.2155 0.1140 0.1550 10  4 I 0.330 0.255 0.080 0.2050 0.0895 0.0395 0.0550 7
In [57]: file.isnull().sum()  Out[57]: Sex
In [59]:
Out[61]: file.dtypes  Out[61]: Sex
350 350 300 250 250 200 200 150
Shucked weight Viscera weight Shell weight Rings
350 300 250 200 200 150 150 300 300 400 300 400 300 300 30
In [65]: file.Rings.describe()  Out[65]: count 4177.000000 mean 9.933884 std 3.224169
min 1.0000000 25% 8.0000000 56% 9.0000000 75% 11.00000000 max 29.0000000 Name: Rings, dtype: float64  In [66]:  plt.figure(figsize=(12,8)) plt.subplot(2,2,1) sns.distplot(file['Rings'], kde=False, bins=range(0, 31, 2)); plt.subplot(2,2,2) sns.boxplot(file['Rings']); plt.subplot(2,2,2) sns.boxplot(file['Rings']); plt.subplot(2,2,3) sns.distplot(file['Rings']); plt.subplot(2,2,3) sns.distplot(file['Rings']); plt.subplot(5,2,3) sns.distplot(file['Rings']);
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be 'data', and passing other arguments without an explicit keyword will result in an error or misinterpretation.  warnings.warn(  C:\ProgramData\Anaconda3\lib\site-packages\seaborn\\distributions.py:2619: FutureWarning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib ility) or histplot' (an axes-level function for histograms).  ### Adaptive of the packages\seaborn\distributions.py:2619: FutureWarning: 'displot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib warnings.warn(msg, FutureWarning)  ### Adaptive of the packages\seaborn\distributions.py:2619: FutureWarning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib warnings.warn(msg, FutureWarning)  ### Adaptive of the packages\seaborn\displays and the packages\displays and the packages\displays and the packages\displays and the packages\displays and the package
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pit subplot(file['Rings'], kde=False, bins=range(0, 31, 2)); pit subplot(file['Rings']); pit subplot(file['Rings']); pit subplot(file['Rings']); pit subplot(file['Rings']); pit subplot(file['Rings']);  C:\ProgramData\Anaconda3\lib\site-packages\seaborn\distributions.py:2619: FutureWarning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib ility) or 'histplot' (an axes-level function for histograms).  warnings. warn(msg., FutureWarning) C:\ProgramData\Anaconda3\lib\site-packages\seaborn\decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be 'data', and passing other arguments without an explicit keyword will result in an error or misinterpretation.  warnings.warn( C:\ProgramData\Anaconda3\lib\site-packages\seaborn\distributions.py:2619: FutureWarning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib ility) or 'histplot' (an axes-level function for histograms).  warnings.warn(msg, FutureWarning)
1000 -
In [68]:  plt.figure(figsize=(12,8)) plt.subplot(3,3,1) sns.distplot(file['length']); plt.subplot(3,3,2) sns.boxplot(file['length']); plt.subplot(3,3,3) sns.distplot(file['length']);
plt.subplot(3,3,4) sns.distplot(file['biameter'], kde=False, bins = 10); plt.subplot(3,3,5) sns.boxplot(file['biameter']); plt.subplot(3,3,6) sns.distplot(file['biameter']); plt.subplot(3,3,7) sns.distplot(file['Height'], kde=False, bins= 10); plt.subplot(3,3,7) sns.distplot(file['Height'], kde=False, bins= 10); plt.subplot(3,3,8) sns.boxplot(file['Height']); plt.subplot(3,3,8) sns.boxplot(file['Height']); plt.subplot(3,3,8) sns.boxplot(file['Height']); plt.subplot(3,3,8) sns.boxplot(file['Height']); plt.subplot(3,3,8) sns.boxplot(file['Height']);  C:\ProgramData\Anaconda3\lib\site-packages\seaborn\distributions.py:2619: FutureWarning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib ility) or 'histplot' (an axes-level function for histograms). warnings. Farar(mags, FutureWarning) varnings. Farar(mags, FutureWarning) C:\ProgramData\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be 'data', and passing other arguments without an explicit keyword will result in an error or misinterpretation.
warnings.warn( C:\Programbata\waacondas\lib\site-packages\seaborn\distributions.py:2619: Future\warning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib warnings.warn(ngs, future\warning) C:\Programbata\waacondas\allib\site-packages\seaborn\distributions.py:2619: Future\warning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib ility) or histplot' (an axes-level function for histograms).  warnings.warn(ngs, future\warning) C:\Programbata\waacondas\allib\site-packages\seaborn\decorators.py:36: Future\warning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be 'data', and passing other arguments without an explicit keyword will result in an error or misinterpretation.  warnings.warn( C:\Programbata\waacondas\allib\site-packages\seaborn\distributions.py:2619: Future\warning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib ility) or 'histplot' (an axes-level function for histograms).  warnings.warn(ngs, future\warning) C:\Programbata\waacondas\allib\site-packages\seaborn\distributions.py:2619: Future\warning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib ility) or 'histplot' (an axes-level function for histograms).  warnings.warn(ngs, future\warning) C:\Programbata\waacondas\allab\site-packages\seaborn\distributions.py:2619: Future\warning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib warnings.warn(ngs, future\warning) C:\Programbata\waacondas\allab\site-packa
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In [70]: file = file[file['Height'] < 0.4] plt: subplot(3,3,1)
<pre>sns. distplot(file['Length'], kde=False, bins= 10); plt. subplot(3,3,3) sns. boxplot(file['Length']); plt. subplot(3,3,4) sns. distplot(file['Diameter'], kde=False, bins= 10); plt. subplot(3,3,5) sns. boxplot(file['Diameter']); plt. subplot(3,3,5) sns. boxplot(file['Diameter']); plt. subplot(3,3,6) sns. distplot(file['Diameter']); plt. subplot(3,3,7) sns. distplot(file['Height'], kde=False, bins = 10); plt. subplot(3,3,7) sns. distplot(file['Height'], kde=False, bins = 10); plt. subplot(3,3,8) sns. boxplot(file['Height']); plt. subplot(3,3,9) sns. distplot(file['Height']);</pre>
C:\Programbata\Anaconda3\lib\site-packages\seaborn\distributions.py:2619: FutureWarning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib varnings, warn(msg, futureWarning)  C:\Programbata\Anaconda3\lib\site-packages\seaborn\\decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be 'data', and passing other arguments without an explicit keyword will result in an error or misinterpretation.  warnings.warn(  C:\Programbata\Anaconda3\lib\site-packages\seaborn\\displot' (a figure-level function with similar flexib ility) or 'histplot' (an axes-level function for histograms).  warnings.warn(msg, FutureWarning)  C:\Programbata\Anaconda3\lib\site-packages\seaborn\displot' (a figure-level function with similar flexib ility) or 'histplot' (an axes-level function for histograms).  warnings.warn(msg, FutureWarning)  C:\Programbata\Anaconda3\lib\site-packages\seaborn\displot' (a figure-level function with similar flexib ility) or 'histplot' (an axes-level function for histograms).  warnings.warn(msg, FutureWarning)  C:\Programbata\Anaconda3\lib\site-packages\seaborn\decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be 'data', and passing other arguments without an explicit keyword will result in an error or missinterpretation.  warnings.warn(  C:\Programbata\Anaconda3\lib\site-packages\seaborn\decorators.py:36: FutureWarning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib warnings.warn(  C:\Programbata\Anaconda3\lib\site-packages\seaborn\decorators.py:2619: FutureWarning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level f
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In [71]:  plt.figure(figsize=(12,8)) plt.subplot(4,3,1) sns.distplot(file['Whole weight']), kde=False, bins= 10); plt.subplot(4,3,2) sns.boxplot(file['Whole weight']); plt.subplot(4,3,4) sns.distplot(file['Shucked weight']), kde=False, bins= 10); plt.subplot(file['Shucked weight']); sns.boxplot(file['Shucked weight']); plt.subplot(4,3,5) sns.boxplot(file['Shucked weight']); plt.subplot(4,3,6) sns.distplot(file['Shucked weight']); plt.subplot(4,3,6) sns.distplot(file['Shucked weight']); plt.subplot(4,3,7) sns.distplot(file['Shucked weight']);
plt.subplot(4,3,8) sns.boxplot(file['viscera weight']); plt.subplot(4,3,9) sns.distplot(file['viscera weight']);  plt.subplot(4,3,10) sns.distplot(file['Shell weight'], kde=False, bins= 10); plt.subplot(4,3,11) sns.boxplot(file['Shell weight']); plt.subplot(4,3,12) sns.distplot(file['Shell weight']);  c:\ProgramData\Anaconda3\lib\site-packages\seaborn\distributions.py:2619: FutureWarning: 'distplot' is a deprecated function and will be removed in a future version. Please adapt your code to use either 'displot' (a figure-level function with similar flexib lity) or 'histplot' (an axes-level function for histograms). warnings.warn(msg. FutureWarning) c:\ProgramData\Anaconda3\lib\site-packages\seaborn\decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be 'data', and passing other arguments without an explicit keyword will result in an error or misinterpretation. warnings.warn( warni
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500
in [72]:  plt.figure(figsize=(5,5)) sns.countplot(file.Sex);  C:\ProgramData\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword variance.  warnings.warn(  1400  1200  \$\frac{1}{5}\$ 800
In [73]: plt.figure(figsize = (10,8)) sns.heatmap(file.corr(), annot = True)  Out[73]: <a> x = x = x = x = x = x = x = x = x = x</a>
Length - 1 0.99 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.
Shell weight - 0.9 0.91 0.89 0.96 0.89 0.91 1 0.63  Rings - 0.58 0.6 0.63 0.55 0.45 0.53 0.63 1  0.5  In [74]:  plt.figure(figsize=(10, 5)) sns.jointplot(data=file, x='Rings', y='Shell weight', kind='reg');
000 25 50 75 100 125 150 175 Rings 12 15 15 0 17 5
In [75]: plt.figure(figsize=(7, 7)) sns.boxplot(data=file, x='Sex', y='Rings');
17.5 15.0 12.5 7.5
In [76]: plt.figure(figsize=(20, 5)) sns.implot(data=file, x='Rings', y='Height', hue='Sex', fit_reg=True); sns.implot(data=file, x='Rings', y='Shell weight', hue='Sex', fit_reg=True); <-Figure size 1440x360 with 0 Axes> 025- 020-
015- 010- 000- 25 50 75 100 125 150 175
08- 100- 1
In [77]:    File   head()
le = LabelEncoder()   file(!Rings')   e le fit_transform(file('Rings'))
In [84]: file.Rings  Out[84]: 6