

Q1

Seaborn have different plots such as:-

- 1.Line Plot:-A Line Plot Is The Simplest Plot In All Plotting Types, As It Is The Visualization Of A Single Function. This Plot Helps Us To See The Relationship Between X-Axis, Y-Axis And It Also Takes Some Parameters Such As Hue, Size, Color, Etc.
- 2.Countplot:-A Count Plot Is Used To Show The Counts Of Observations In Each Categorical Bin Using Bars.This Method Is Accepting The Parameters X, Y Which Take The Name Of A Variable In Data, Hue It Is An Optional Parameter It Helps To Take Column Name For Color Encoding.
- 3.Bar Chart:-A Bar Chart Is A Way Of Comparing A Set Of Categorical Data. It Is Better To Convert Continuous Data To Bins Before Plotting. The Bar Chart Displays Data Using Several Bars, Each Representing A Particular Category.
- 4.Pairplot:-Pair Plot Creates A Grid Of Axis Such That Each Numeric Variable In Data Will Create A Plot Between Each Other The Y-Axis Across A Single Row And The X-Axis Across A Single Column.
- 5.Scatter Plot:- Scatter Plot Is The Same As A Line Plot, In A Line Plot Instead Of Points Being Joined By Line Segments, The Points Are Shown Individually With A Dot, Circle, Or Any Other Shape. The Position Of Each Marker On The Horizontal And Vertical Axis Indicates Values For An Individual Data Point.
- 6.Histogram:-A Histogram Is A Graph That Shows The Underlying Frequency Distribution Of A Set Of Continuous Data. This Chart Is Helpful In Data Collection And Data Analysis And Hence It Is Widely Used In The Analytics Industry.

In [5]:

```
#Q2

import seaborn as sns
sns.load_dataset("fmri")
```

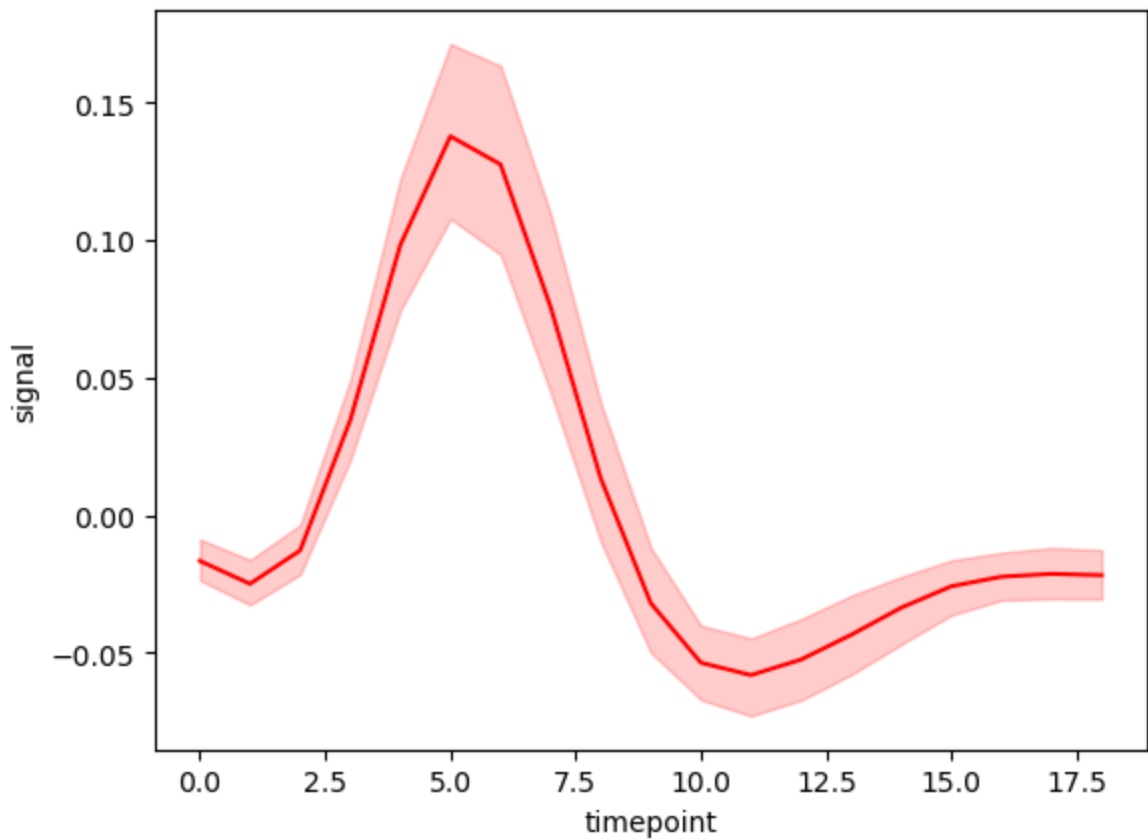
Out[5]:

	subject	timepoint	event	region	signal
0	s13	18	stim	parietal	-0.017552
1	s5	14	stim	parietal	-0.080883
2	s12	18	stim	parietal	-0.081033
3	s11	18	stim	parietal	-0.046134
4	s10	18	stim	parietal	-0.037970
...	...	...	...	...	...
1059	s0	8	cue	frontal	0.018165
1060	s13	7	cue	frontal	-0.029130
1061	s12	7	cue	frontal	-0.004939
1062	s11	7	cue	frontal	-0.025367
1063	s0	0	cue	parietal	-0.006899

1064 rows × 5 columns

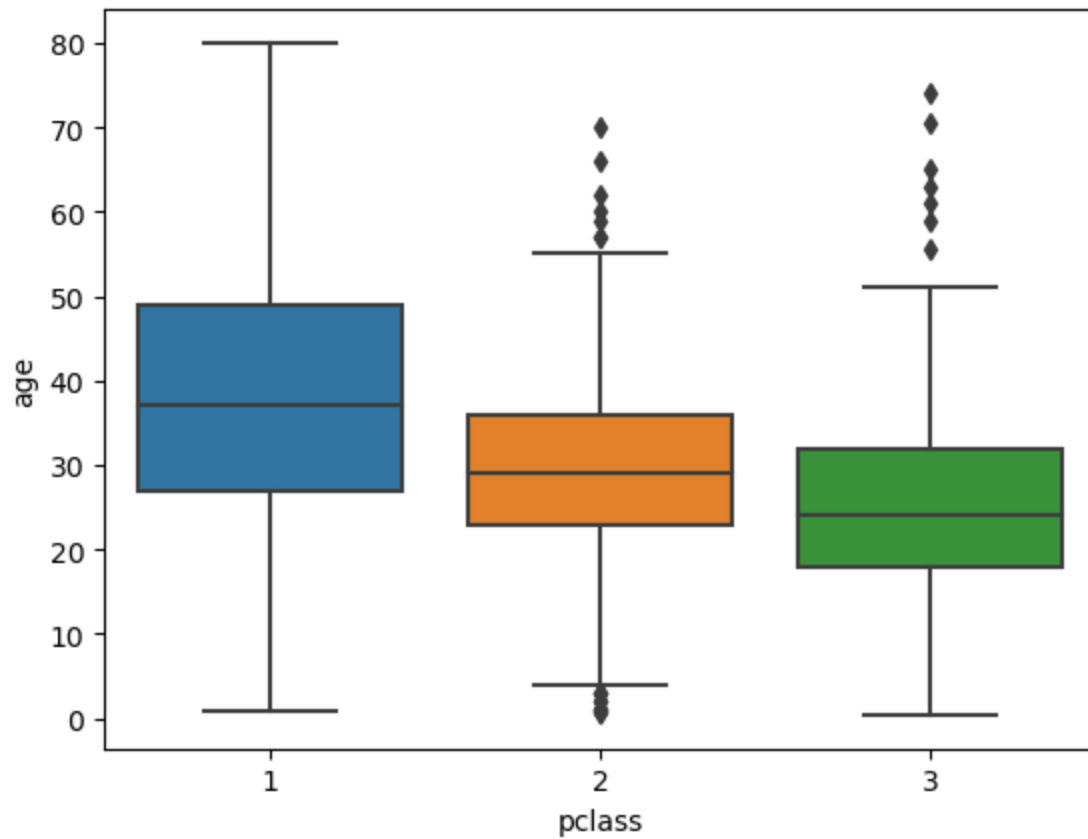
```
In [13]: sns.lineplot(data=df,x='timepoint',y='signal',color="red")
```

```
Out[13]: <AxesSubplot: xlabel='timepoint', ylabel='signal'>
```



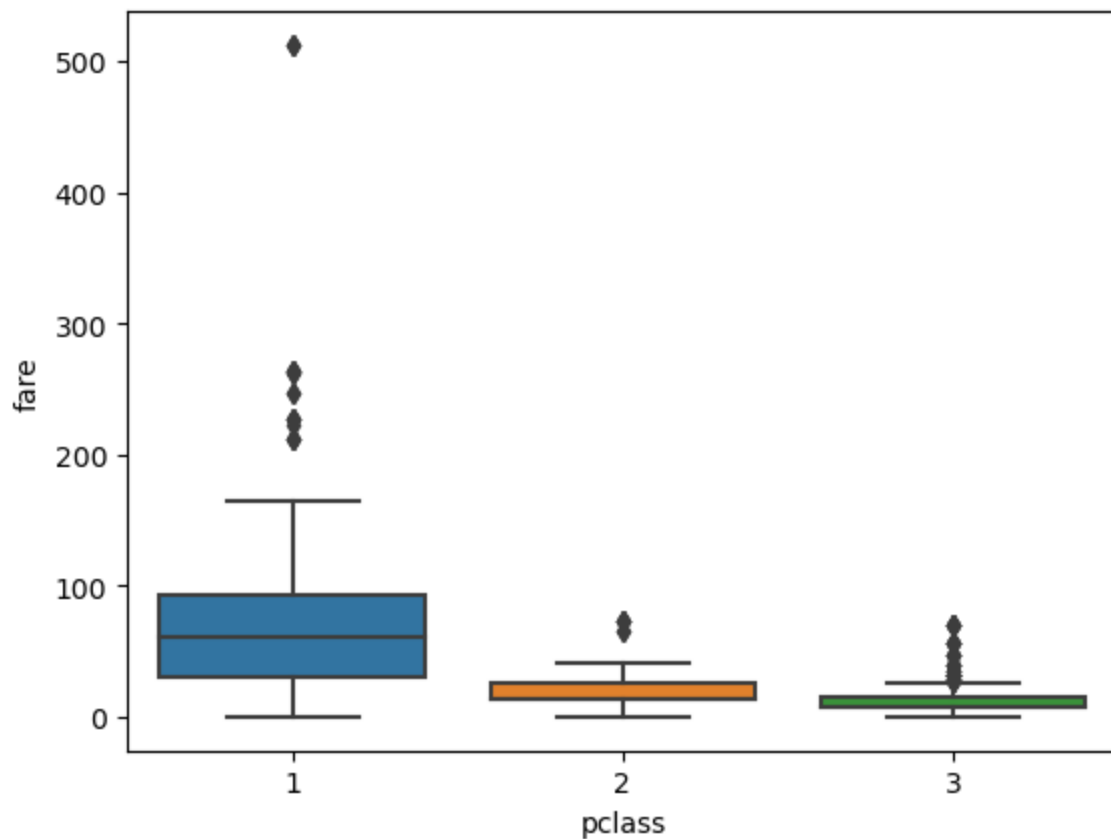
```
In [15]: #Q3
import seaborn as sns
df=sns.load_dataset("titanic")
sns.boxplot(data=df,x='pclass',y='age')
```

```
Out[15]: <AxesSubplot: xlabel='pclass', ylabel='age'>
```



```
In [18]: sns.boxplot(data=df,x='pclass',y='fare')
```

```
Out[18]: <AxesSubplot: xlabel='pclass', ylabel='fare'>
```



```
In [23]: #Q4
import seaborn as sns
sns.load_dataset("diamonds")
```

```
Out[23]:
```

	carat	cut	color	clarity	depth	table	price	x	y	z
0	0.23	Ideal	E	SI2	61.5	55.0	326	3.95	3.98	2.43
1	0.21	Premium	E	SI1	59.8	61.0	326	3.89	3.84	2.31
2	0.23	Good	E	VS1	56.9	65.0	327	4.05	4.07	2.31
3	0.29	Premium	I	VS2	62.4	58.0	334	4.20	4.23	2.63
4	0.31	Good	J	SI2	63.3	58.0	335	4.34	4.35	2.75
...	...	...	...	...	...	...	...	...	...	...
53935	0.72	Ideal	D	SI1	60.8	57.0	2757	5.75	5.76	3.50
53936	0.72	Good	D	SI1	63.1	55.0	2757	5.69	5.75	3.61
53937	0.70	Very Good	D	SI1	62.8	60.0	2757	5.66	5.68	3.56
53938	0.86	Premium	H	SI2	61.0	58.0	2757	6.15	6.12	3.74
53939	0.75	Ideal	D	SI2	62.2	55.0	2757	5.83	5.87	3.64

53940 rows × 10 columns

```
In [36]: X=df['price']
Y=df['cut']
sns.distplot(X,label='Y')
```

/tmp/ipykernel\_117/2918881724.py:3: UserWarning:

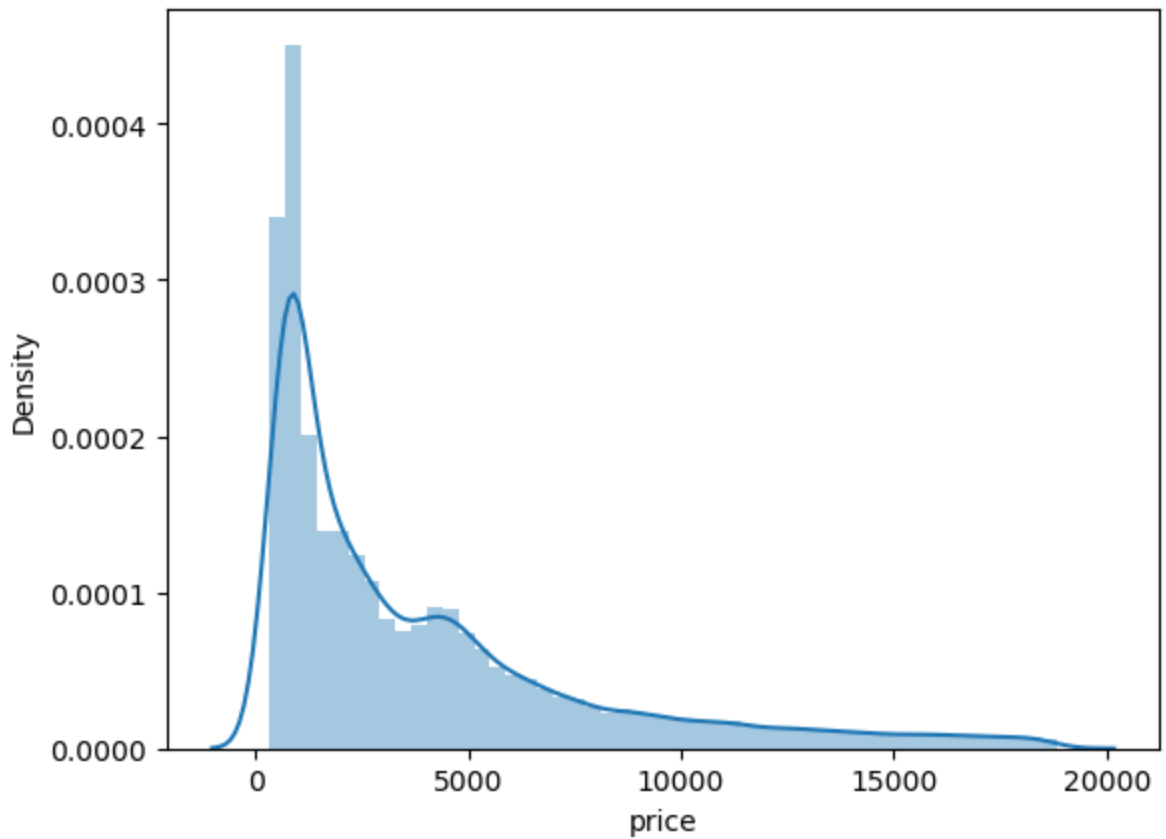
`distplot` is a deprecated function and will be removed in seaborn v0.14.0.

Please adapt your code to use either `displot` (a figure-level function with similar flexibility) or `histplot` (an axes-level function for histograms).

For a guide to updating your code to use the new functions, please see <https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751>

```
sns.distplot(X,label='Y')
```

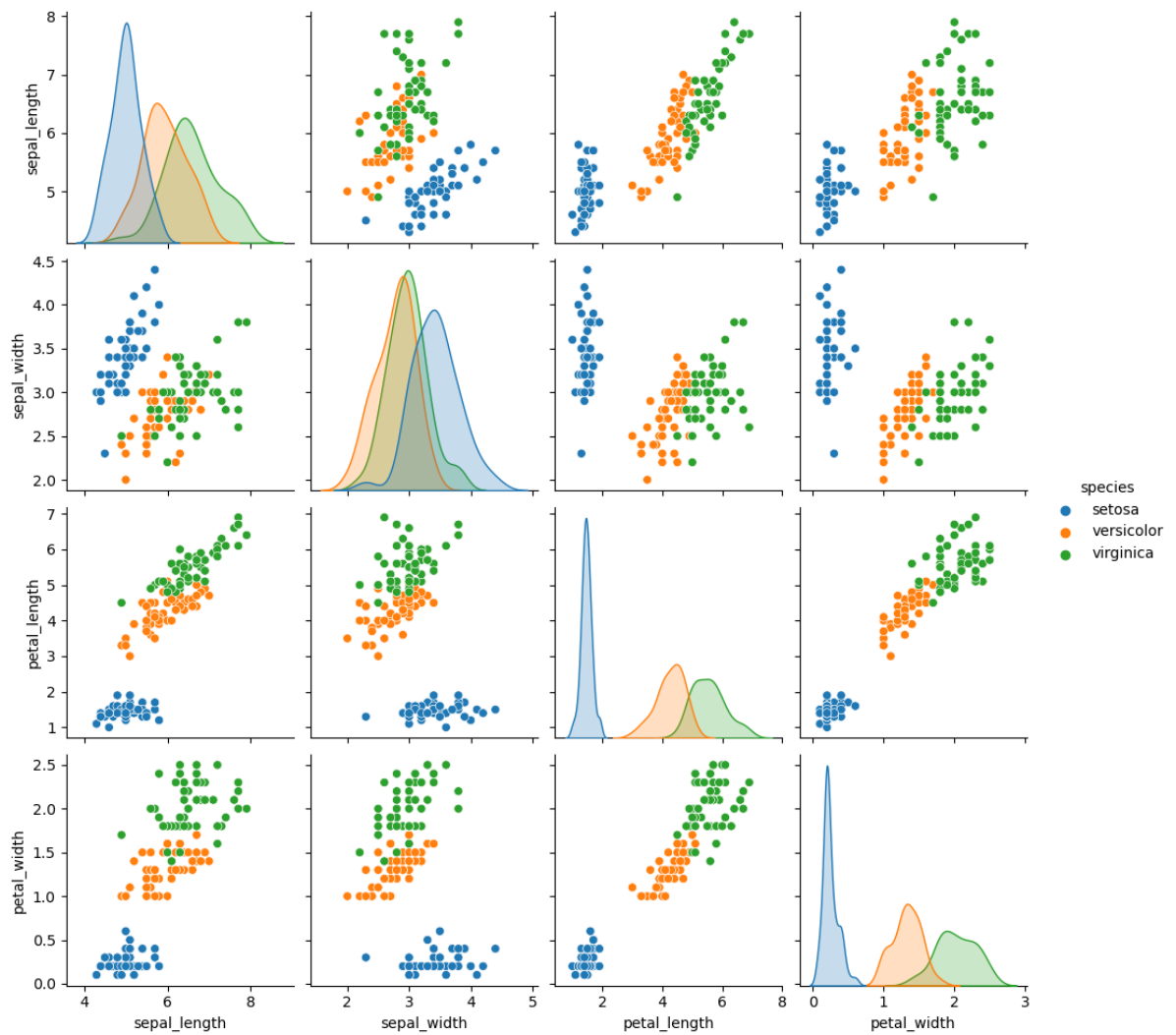
```
Out[36]: <AxesSubplot: xlabel='price', ylabel='Density'>
```



```
In [38]: #Q5
import seaborn as sns
df=sns.load_dataset("iris")
```

```
In [39]: sns.pairplot(data=df,hue='species')
```

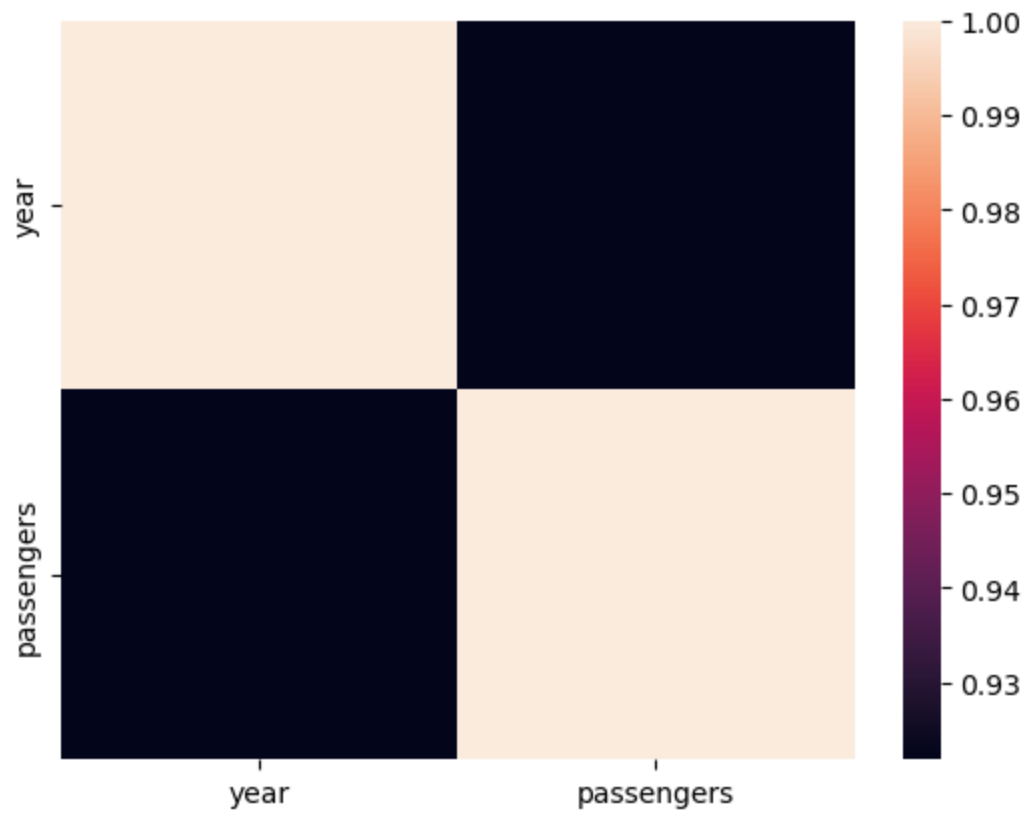
```
Out[39]: <seaborn.axisgrid.PairGrid at 0x7f687977eaa0>
```



```
In [43]: #Q6
import seaborn as sns
data=sns.load_dataset("flights")
```

```
In [51]: df1=data[['year', 'passengers']].corr()
sns.heatmap(data=df1)
```

```
Out[51]: <AxesSubplot: >
```



```
In [ ]:
```