```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
data=pd.read_csv("/content/Titanic-Dataset.csv")
data.head()
```

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.2500	NaN	S
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599	71.2833	C85	C
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282	7.9250	NaN	S
				Futrelle, Mrs. Jacques Heath								

Next steps: Generate code with data | View recommended plots | New interactive sheet

```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 891 entries, 0 to 890
Data columns (total 12 columns):
 #   Column       Non-Null Count  Dtype
---  ------       --------------  -----
 0   PassengerId  891 non-null    int64
 1   Survived     891 non-null    int64
 2   Pclass       891 non-null    int64
 3   Name         891 non-null    object
 4   Sex          891 non-null    object
 5   Age          714 non-null    float64
 6   SibSp        891 non-null    int64
 7   Parch        891 non-null    int64
 8   Ticket       891 non-null    object
 9   Fare         891 non-null    float64
 10  Cabin        204 non-null    object
 11  Embarked     889 non-null    object
dtypes: float64(2), int64(5), object(5)
memory usage: 83.7+ KB
```

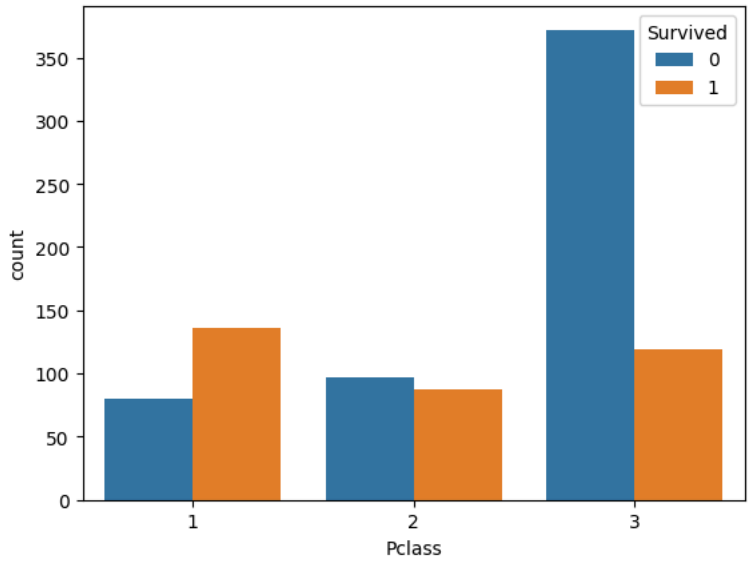
```
data.isnull().sum()
```

	0
PassengerId	0
Survived	0
Pclass	0
Name	0
Sex	0
Age	177
SibSp	0
Parch	0
Ticket	0
Fare	0
Cabin	687
Embarked	2

dtype: int64

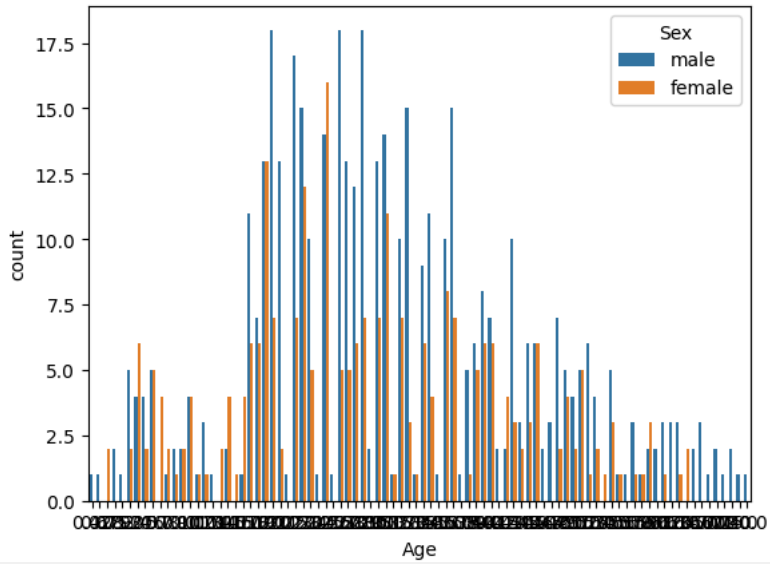
```
sns.countplot(x=data['Pclass'],hue=data['Survived'])
```

```
<Axes: xlabel='Pclass', ylabel='count'>
```




```
sns.countplot(x=data['Age'],hue=data['Sex'])
```

```
<Axes: xlabel='Age', ylabel='count'>
```




```
##replacing null values
data['Age']=data['Age'].fillna(round(data['Age'].mean(),2))
```

```
data.isnull().sum()
```

	0
PassengerId	0
Survived	0
Pclass	0
Name	0
Sex	0
Age	0
SibSp	0
Parch	0
Ticket	0
Fare	0
Cabin	687
Embarked	2

dtype: int64

```
##droping the column

data.drop(['PassengerId','Name','Fare','Cabin','Embarked','Ticket'],axis=1,inplace=True)


from sklearn.preprocessing import LabelEncoder

encoder=LabelEncoder()
data['Sex']=encoder.fit_transform(data['Sex'])


data.head()
```

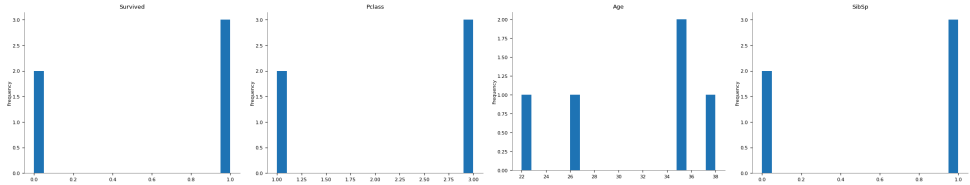
	Survived	Pclass	Sex	Age	SibSp	Parch
0	0	3	1	22.0	1	0
1	1	1	0	38.0	1	0
2	1	3	0	26.0	0	0
3	1	1	0	35.0	1	0
4	0	3	1	35.0	0	0

Next steps: Generate code with data | View recommended plots | New interactive sheet

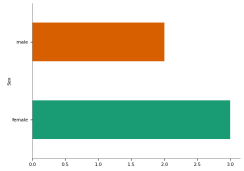
```
data.head()
```

	Survived	Pclass	Sex	Age	SibSp	Parch
0	0	3	male	22.0	1	0
1	1	1	female	38.0	1	0
2	1	3	female	26.0	0	0
3	1	1	female	35.0	1	0
4	0	3	male	35.0	0	0

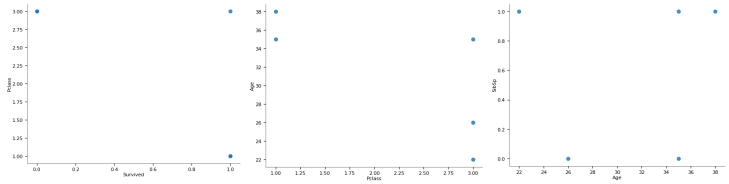
Distributions



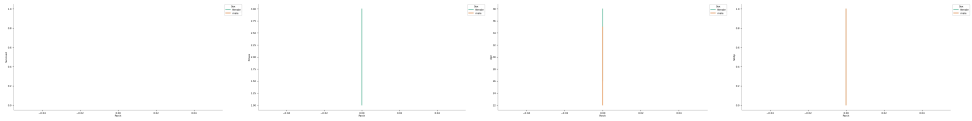
Categorical distributions



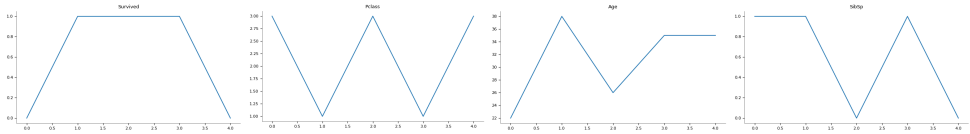
2-d distributions



Time series



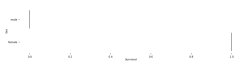
Values



Faceted distributions

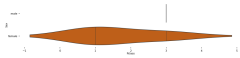
```
<string>:5: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `y` variable to `hue` and set
```



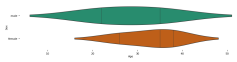
```
<string>:5: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `y` variable to `hue` and set
```



```
<string>:5: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `y` variable to `hue` and set
```



```
<string>:5: FutureWarning:

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `y` variable to `hue` and set
```

Next steps: Generate code with `data` | View recommended plots | New interactive sheet

```
## display data in x and y

y=data['Survived'].values
x=data.drop(['Survived'],axis=1).values



y
```

	Survived
0	0
1	1
2	1
3	1
4	0
...	...
886	0
887	1
888	0
889	1
890	0

891 rows × 1 columns

```
##split the data into
from sklearn.model_selection import train_test_split

x_train,x_test,y_train,y_test=train_test_split(x,y,train_size=0.8,random_state=0)
```

```
len(x_train)
```

```
712
```

```
len(x_test)
```

```
179
```

```
len(y_test)
len(y_train)
```