

```
1 # Importing the libraries
2 import numpy as np
3 import matplotlib.pyplot as plt
4 import pandas as pd
```

```
1 from google.colab import drive
2 drive.mount('/content/drive')
```

Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force\_remo

```
1 # Importing the dataset
2 df = pd.read_csv('Data.csv')
```

```
1 # Fill Missing value
2 df['Salary'].fillna((df['Salary'].mean()), inplace= True)
3 df['Age'].fillna((df['Age'].mean()), inplace= True)
```

```
1 #get dummy
2 df['Purchased'] = df['Purchased'].apply(lambda x: 0 if x=='No' else 1)
```

```
1 df=pd.get_dummies(data=df, columns=['Country'])
```

```
1 df
```

	Age	Salary	Purchased	Country_France	Country_Germany	Country_Spain
0	44.000000	72000.000000	0	1	0	0
1	27.000000	48000.000000	1	0	0	1
2	30.000000	54000.000000	0	0	1	0
3	38.000000	61000.000000	0	0	0	1
4	40.000000	63777.777778	1	0	1	0

```
1 from sklearn.preprocessing import StandardScaler
2 sc_X = StandardScaler()
```

```

7  48 000000  79000 000000      1      1      0      0
1 sc_X = sc_X.fit_transform(df)
2 sc_X
```

```
array([[ 7.58874362e-01,  7.49473254e-01, -1.00000000e+00,
        1.22474487e+00, -6.54653671e-01, -6.54653671e-01],
       [-1.71150388e+00, -1.43817841e+00,  1.00000000e+00,
        -8.16496581e-01, -6.54653671e-01,  1.52752523e+00],
       [-1.27555478e+00, -8.91265492e-01, -1.00000000e+00,
        -8.16496581e-01,  1.52752523e+00, -6.54653671e-01],
       [-1.13023841e-01, -2.53200424e-01, -1.00000000e+00,
        -8.16496581e-01, -6.54653671e-01,  1.52752523e+00],
       [ 1.77608893e-01,  6.63219199e-16,  1.00000000e+00,
        -8.16496581e-01,  1.52752523e+00, -6.54653671e-01],
       [-5.48972942e-01, -5.26656882e-01,  1.00000000e+00,
        1.22474487e+00, -6.54653671e-01, -6.54653671e-01],
       [ 0.00000000e+00, -1.07356980e+00, -1.00000000e+00,
        -8.16496581e-01, -6.54653671e-01,  1.52752523e+00],
       [ 1.34013983e+00,  1.38753832e+00,  1.00000000e+00,
        1.22474487e+00, -6.54653671e-01, -6.54653671e-01],
       [ 1.63077256e+00,  1.75214693e+00, -1.00000000e+00,
        -8.16496581e-01,  1.52752523e+00, -6.54653671e-01],
       [-2.58340208e-01,  2.93712492e-01,  1.00000000e+00,
        1.22474487e+00, -6.54653671e-01, -6.54653671e-01]])
```

```
1 #Convert to table format - StandardScaler
```

```
2 sc_X = pd.DataFrame(data=sc_X, columns=["Age", "Salary", "Purchased", "Country_France", "Country_Germany", "Country_Spain"])
```

```

2 sc_X = pd.DataFrame(data=sc_X, columns=[ 'Age' , 'Salary' , 'Purchased' , 'Country_France' ,
3 sc_X

```

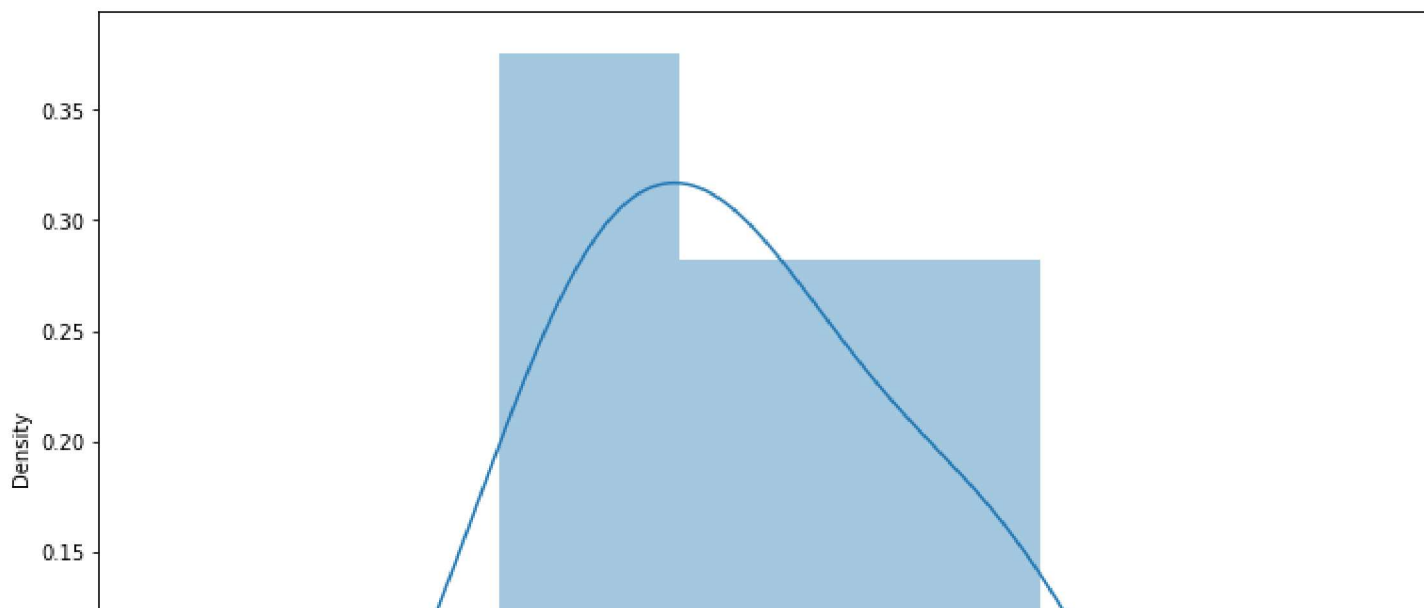
	Age	Salary	Purchased	Country_France	Country_Germany	Country_spain
0	0.758874	7.494733e-01	-1.0	1.224745	-0.654654	-0.654654
1	-1.711504	-1.438178e+00	1.0	-0.816497	-0.654654	1.527525
2	-1.275555	-8.912655e-01	-1.0	-0.816497	1.527525	-0.654654
3	-0.113024	-2.532004e-01	-1.0	-0.816497	-0.654654	1.527525
4	0.177609	6.632192e-16	1.0	-0.816497	1.527525	-0.654654
5	-0.548973	-5.266569e-01	1.0	1.224745	-0.654654	-0.654654
6	0.000000	-1.073570e+00	-1.0	-0.816497	-0.654654	1.527525
7	1.340140	1.387538e+00	1.0	1.224745	-0.654654	-0.654654
8	1.630773	1.752147e+00	-1.0	-0.816497	1.527525	-0.654654
9	-0.258340	2.937125e-01	1.0	1.224745	-0.654654	-0.654654

```

1 import seaborn as sns
2 plt.figure(figsize=(12,8))
3 sns.distplot(sc_X['Salary'])
4 import statistics
5 print("Standard Deviation of sc_Salary is % s "
6       % (statistics.stdev(sc_X['Salary'])))

```

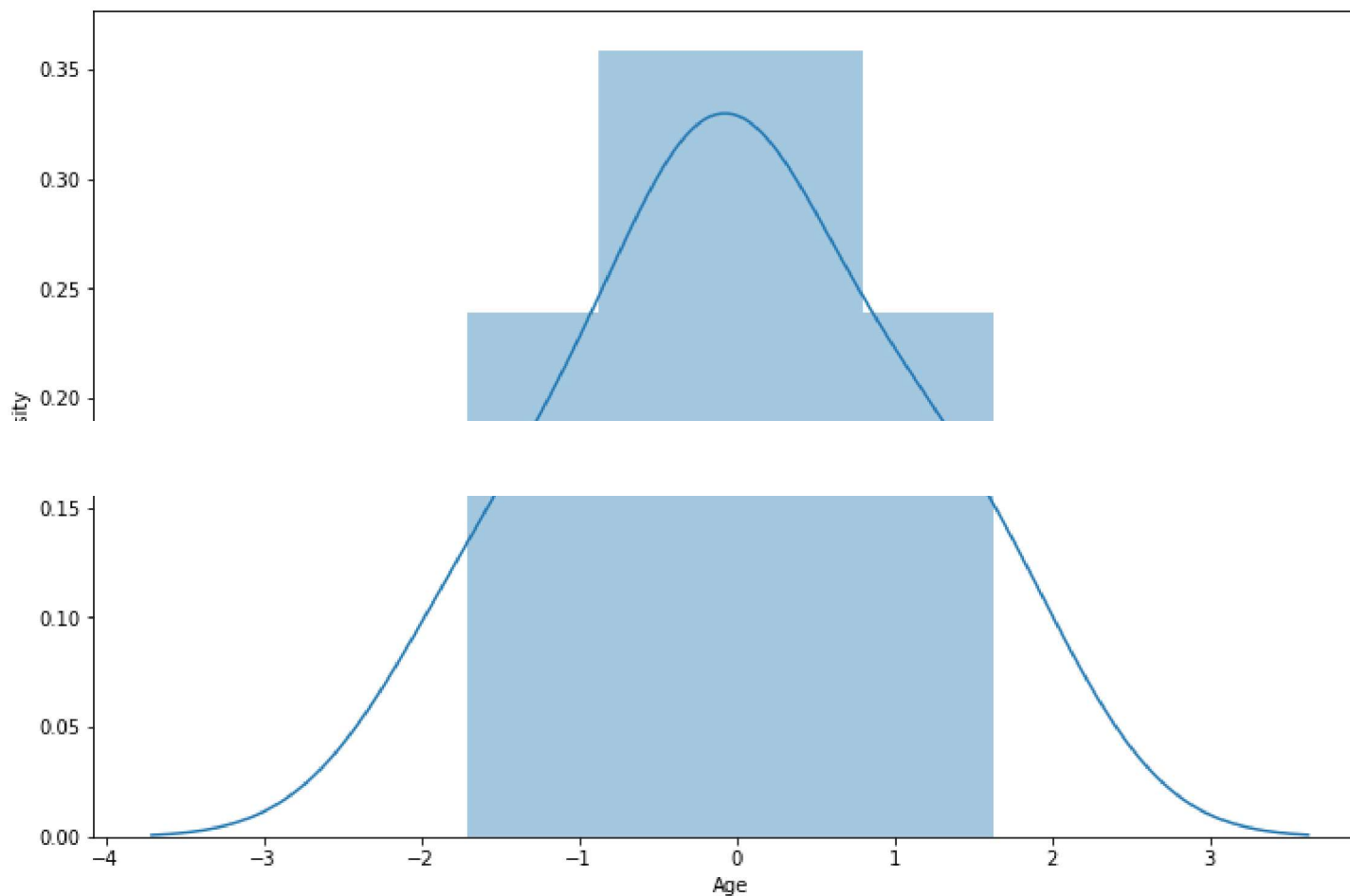
```
/usr/local/lib/python3.7/dist-packages/seaborn/distributions.py:2557: FutureWarning: `distplot` is a deprecated functi  
warnings.warn(msg, FutureWarning)  
Standard Deviation of sc_Salary is 1.0540925533894598
```



```
1 plt.figure(figsize=(12,8))  
2 sns.distplot(sc_X['Age'])  
3 print("Standard Deviation of sc_Salary is % s "  
4       % (statistics.stdev(sc_X['Age'])))
```

Standard Deviation of sc\_Salary is 1.0540925533894598

/usr/local/lib/python3.7/dist-packages/seaborn/distributions.py:2557: FutureWarning: `distplot` is a deprecated function  
warnings.warn(msg, FutureWarning)



1

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