

Seaborn

```
import seaborn as sns
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt

Mydata = {"Name":['Ram','Sam','Joe','Asha'],
          "Age":[23,22,26,47],
          "Salary":[1000,30000,30000,35000],
          "Experience":[2,1,3,10]}

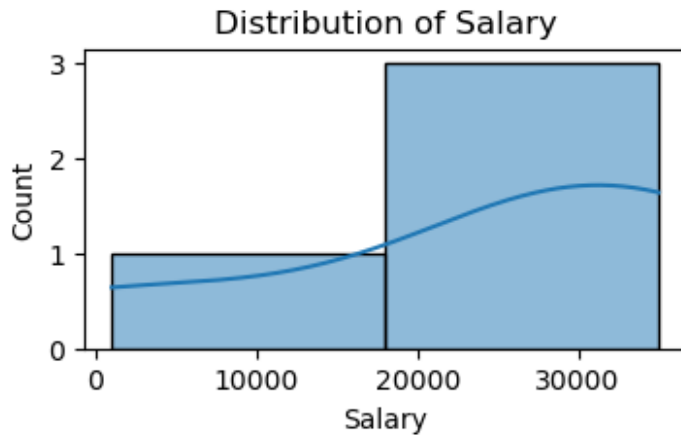
df = pd.DataFrame(Mydata)
df.head()
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 4 entries, 0 to 3
Data columns (total 4 columns):
#   Column          Non-Null Count  Dtype
---  -
0   Name            4 non-null     object
1   Age             4 non-null     int64
2   Salary          4 non-null     int64
3   Experience       4 non-null     int64
dtypes: int64(3), object(1)
memory usage: 260.0+ bytes
```

1.Histogram

```
plt.figure(figsize = (4,2))
sns.histplot(df['Salary'], kde = True, bins = 2)
plt.title("Distribution of Salary")
plt.show()
```

```
C:\ProgramData\anaconda3\Lib\site-packages\seaborn\_oldcore.py:1119:
FutureWarning: use_inf_as_na option is deprecated and will be removed
in a future version. Convert inf values to NaN before operating
instead.
  with pd.option_context('mode.use_inf_as_na', True):
```



1. Negative Skew, lower salary value, below average value detected 2. no outliers 3. average salary is around 30000 4. majority salary values are between 200 and 35000

Correlation Matrix(heatmap)

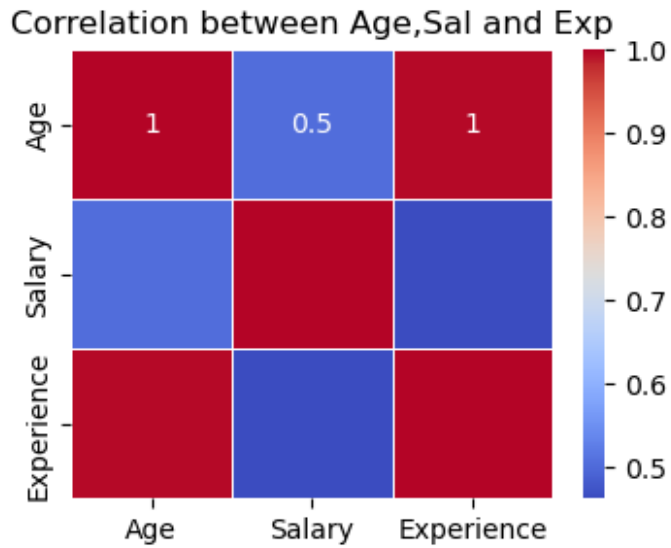
*# Step 1: filter numerical data*

```
ndf = df.select_dtypes(include = ['number'])
ndf.head()
```

	Age	Salary	Experience
0	23	1000	2
1	22	30000	1
2	26	30000	3
3	47	35000	10

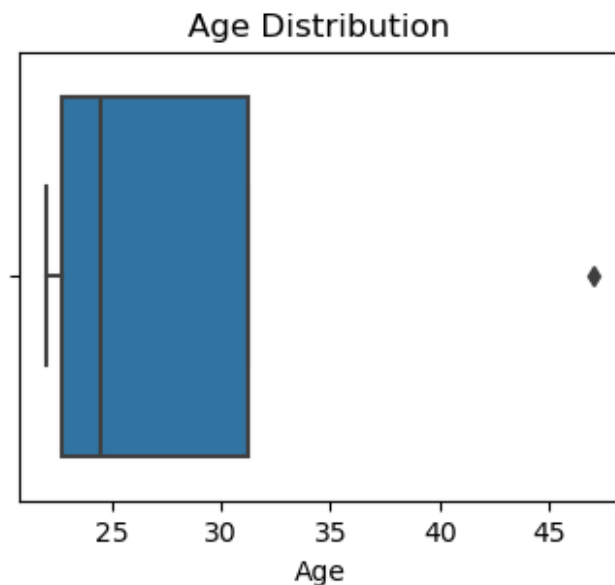
*# Step 2:*

```
plt.figure(figsize = (4,3))
sns.heatmap(ndf.corr(), cmap = "coolwarm", annot = True, linewidths=
0.5)
plt.title("Correlation between Age, Sal and Exp")
plt.show()
```



1.Age and Experience are more correlated to each other 2.Age and Salary is less correlated to each other

```
plt.figure(figsize = (4,3))
sns.boxplot(x = df['Age'])
plt.title("Age Distribution")
plt.show()
```



1.one abnormal value is around 47 2.the average age is around 24

```
import seaborn as sns
import pandas as pd
```

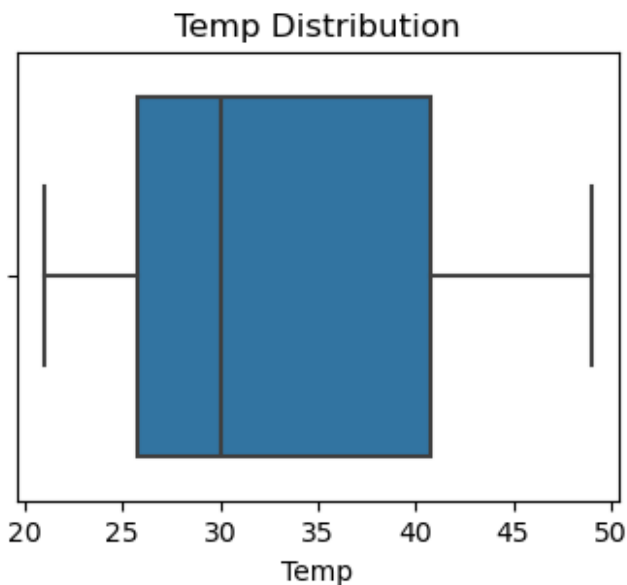
```
import numpy as np
import matplotlib.pyplot as plt

mydata = {
    "Temp": [21, 47, 39, 22, 31, 33, 29, 26, 27, 25, 49, 46],
}

df = pd.DataFrame(mydata)
df.head()

Temp
0    21
1    47
2    39
3    22
4    31

plt.figure(figsize = (4,3))
sns.boxplot(x = df['Temp'])
plt.title("Temp Distribution")
plt.show()
```



Countplot

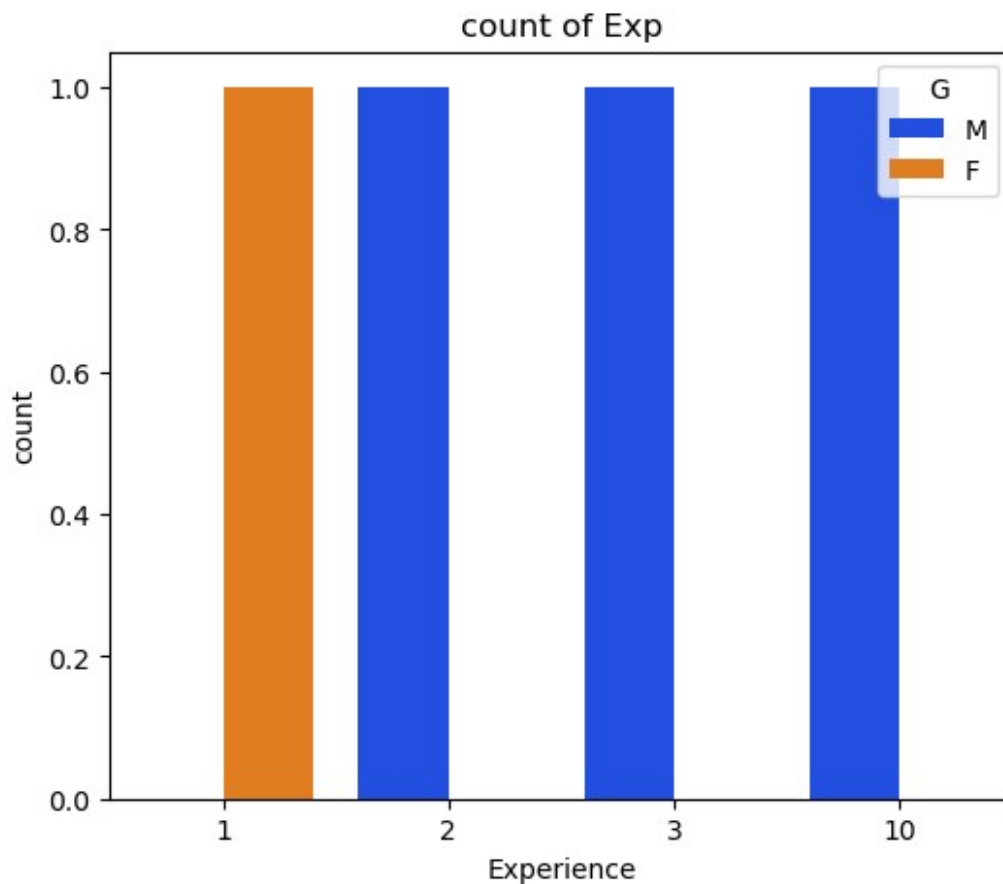
```
mydata1 = {"Name": ['Ram', 'Sam', 'Joe', 'Asha'],
            "Age": [23, 22, 26, 47],
            "Salary": [1000, 30000, 30000, 35000],
            "Experience": [2, 1, 3, 10],
            "G": ['M', 'F', 'M', 'M']}
```

```

    }
df1 = pd.DataFrame(mydata1)

plt.figure(figsize=(6,5))
sns.countplot(x = df1['Experience'], palette = 'bright', hue =
df1['G'])
plt.title("count of Exp")
plt.show()

```

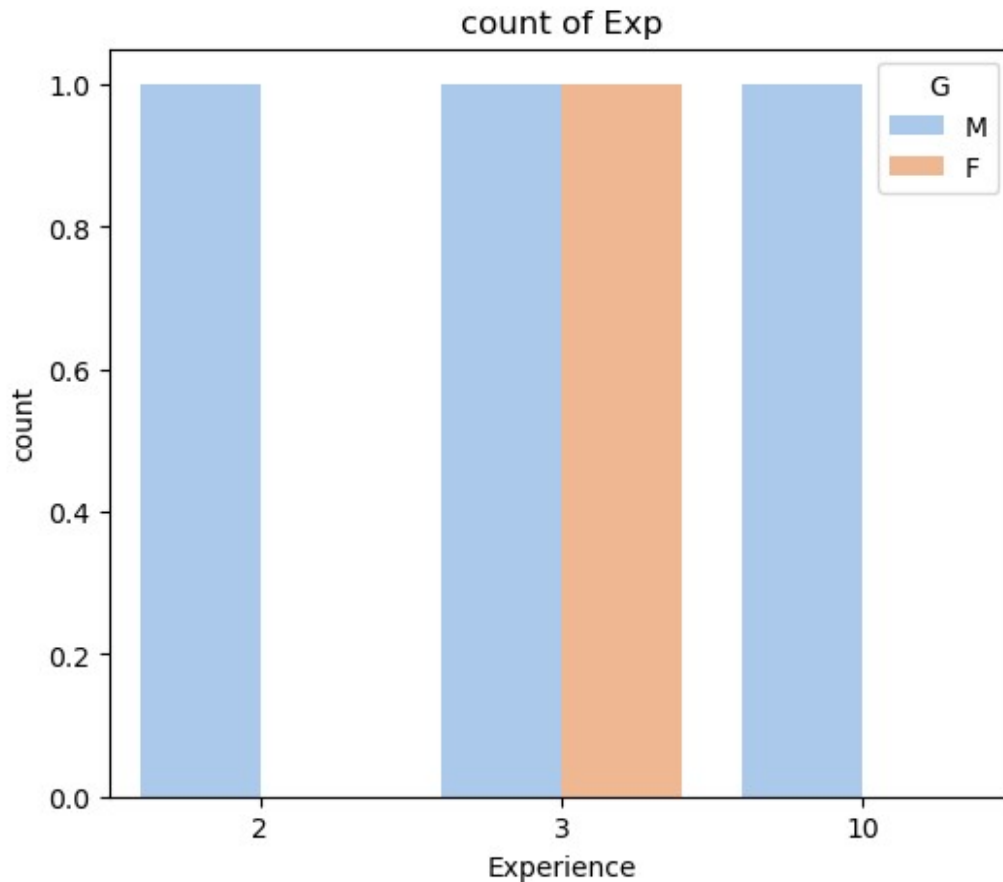


```

mydata1 = {"Name": ['Ram', 'Sam', 'Joe', 'Asha'],
            "Age": [23, 22, 26, 47],
            "Salary": [1000, 30000, 30000, 35000],
            "Experience": [2, 3, 3, 10],
            "G": ['M', 'F', 'M', 'M']}
df1 = pd.DataFrame(mydata1)

plt.figure(figsize=(6,5))
sns.countplot(x = df1['Experience'], palette = 'pastel', hue =
df1['G'])
plt.title("count of Exp")
plt.show()

```



## Pair plot

```
sns.pairplot(df1, hue='G')
```

C:\ProgramData\anaconda3\Lib\site-packages\seaborn\\_oldcore.py:1119: FutureWarning: use\_inf\_as\_na option is deprecated and will be removed in a future version. Convert inf values to NaN before operating instead.

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```
with pd.option_context('mode.use_inf_as_na', True):
```

```
<seaborn.axisgrid.PairGrid at 0x23311c28790>
```

