```python
#1. NUMPY
import numpy as np

arr = np.array([[-1, 2, 0, 4],
                [4, -0.5, 6, 0],
                [2.6, 0, 7, 8],
                [3, -7, 4, 2.0]])
print("Initial Array: ")
print(arr)
```

```
Initial Array:
[[-1.   2.   0.   4. ]
 [ 4.  -0.5  6.   0. ]
 [ 2.6  0.   7.   8. ]
 [ 3.  -7.   4.   2. ]]
```

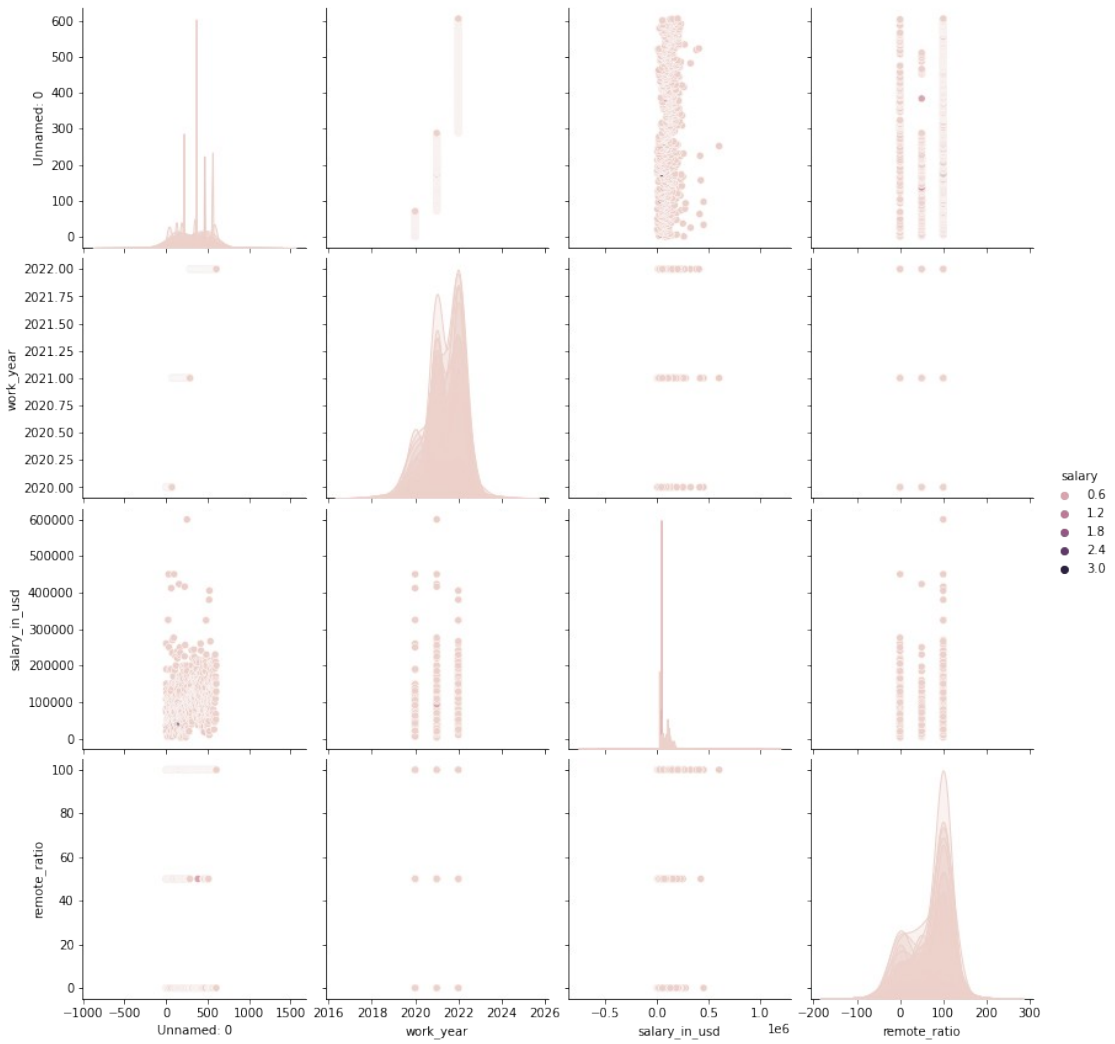
```python
#2. PANDAS
import pandas as pd

s1 = pd.Series([1, 3, 4, 5, 6, 2, 9])

s2 = pd.Series([1.1, 3.5, 4.7, 5.8, 2.9, 9.3])

s3 = pd.Series(['a', 'b', 'c', 'd', 'e'])

Data ={'first':s1, 'second':s2, 'third':s3}

df = pd.read_csv('/content/sample_data/ds_salaries.csv')
print(df)
```

```
     Unnamed: 0  work_year experience_level employment_type  \
0             0       2020               MI              FT
1             1       2020               SE              FT
2             2       2020               SE              FT
3             3       2020               MI              FT
4             4       2020               SE              FT
..          ...        ...              ...             ...
602         602       2022               SE              FT
603         603       2022               SE              FT
604         604       2022               SE              FT
605         605       2022               SE              FT
606         606       2022               MI              FT

                    job_title  salary salary_currency  salary_in_usd
\
0               Data Scientist   70000             EUR          79833

1    Machine Learning Scientist  260000             USD         260000

2             Big Data Engineer   85000             GBP         109024
```

```
3          Product Data Analyst   20000             USD          20000

4     Machine Learning Engineer  150000             USD         150000

..                          ...     ...             ...            ...

602               Data Engineer  154000             USD         154000

603               Data Engineer  126000             USD         126000

604                Data Analyst  129000             USD         129000

605                Data Analyst  150000             USD         150000

606                AI Scientist  200000             USD         200000


    employee_residence  remote_ratio company_location company_size
0                   DE             0                DE            L
1                   JP             0                JP            S
2                   GB            50                GB            M
3                   HN             0                HN            S
4                   US            50                US            L
..                 ...           ...               ...          ...
602                 US           100                US            M
603                 US           100                US            M
604                 US             0                US            M
605                 US           100                US            M
606                 IN           100                US            L

[607 rows x 12 columns]
```

```
#3. SEABORN
import seaborn as sns

sns.pairplot(df,hue="salary",height=3)
```

```
<seaborn.axisgrid.PairGrid at 0x7f32024d5650>
```




```python
#4. TENSORFLOW
import tensorflow as tf

mnist = tf.keras.datasets.mnist
(x_train, y_train), (x_test, y_test) = mnist.load_data()
x_train, x_test = x_train / 255.0, x_test / 255.0

model = tf.keras.models.Sequential([
  tf.keras.layers.Flatten(input_shape=(28, 28)),
  tf.keras.layers.Dense(128, activation='relu'),
  tf.keras.layers.Dropout(0.2),
  tf.keras.layers.Dense(10)
])

#5. PYTZ
from pytz import timezone
from datetime import datetime

format = "%Y-%m-%d %H:%M:%S %Z%z"
```

```
now_utc = datetime.now(timezone('UTC'))
print(now_utc.strftime(format))

now_asia = now_utc.astimezone(timezone('Asia/Kolkata'))
print(now_asia.strftime(format))
```

```
2022-10-07 16:36:09 UTC+0000
2022-10-07 22:06:09 IST+0530
```