

# Vijay(Book20) 04/08/2023

In [1]:

```

1 import numpy as np
2 import pandas as pd
3 import matplotlib.pyplot as plt
4 import seaborn as sns
5 from sklearn.linear_model import LogisticRegression
6 from sklearn.preprocessing import StandardScaler
7 import re
8 from sklearn.datasets import load_digits
9 from sklearn.model_selection import train_test_split

```

In [2]:

```

1 a=pd.read_csv(r"C:\Users\user\Downloads\Book20.csv")
2 a

```

Out[2]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	
0	1817	WEST RAJASTHAN	1901	6.7	0.0	1.1	0.0	6.1	3.0	79.0	59.2	1.0	2.1	
1	1818	WEST RAJASTHAN	1902	0.0	0.0	0.0	0.5	4.0	49.1	27.0	71.3	41.8	1.8	
2	1819	WEST RAJASTHAN	1903	1.7	1.3	5.5	0.0	4.2	2.7	154.8	87.1	49.3	0.1	
3	1820	WEST RAJASTHAN	1904	3.8	2.9	16.3	0.7	11.4	14.6	39.8	45.6	21.4	1.4	
4	1821	WEST RAJASTHAN	1905	6.3	4.8	0.7	1.3	0.3	4.9	30.1	0.6	64.5	0.0	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
110	1927	WEST RAJASTHAN	2011	0.0	11.8	1.5	1.5	7.8	24.4	88.5	166.8	116.3	0.1	
111	1928	WEST RAJASTHAN	2012	0.5	0.0	0.0	9.5	10.4	5.3	40.4	166.7	92.0	1.9	
112	1929	WEST RAJASTHAN	2013	8.6	21.8	4.2	3.1	1.7	37.6	104.5	138.2	58.7	10.1	
113	1930	WEST RAJASTHAN	2014	0.8	2.2	4.7	8.4	23.0	13.8	94.3	69.6	84.9	0.5	
114	1931	WEST RAJASTHAN	2015	1.4	0.9	30.3	25.2	15.5	53.2	234.6	60.5	35.7	1.1	

115 rows × 20 columns



In [3]: 1 a.info()

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 115 entries, 0 to 114
Data columns (total 20 columns):
#   Column                Non-Null Count  Dtype
---  -
0   index                  115 non-null   int64
1   SUBDIVISION            115 non-null   object
2   YEAR                   115 non-null   int64
3   JAN                    115 non-null   float64
4   FEB                    115 non-null   float64
5   MAR                    115 non-null   float64
6   APR                    115 non-null   float64
7   MAY                    115 non-null   float64
8   JUN                    115 non-null   float64
9   JUL                    115 non-null   float64
10  AUG                    115 non-null   float64
11  SEP                    115 non-null   float64
12  OCT                    115 non-null   float64
13  NOV                    115 non-null   float64
14  DEC                    115 non-null   float64
15  ANNUAL                 115 non-null   float64
16  Jan-Feb               115 non-null   float64
17  Mar-May               115 non-null   float64
18  Jun-Sep               115 non-null   float64
19  Oct-Dec               115 non-null   float64
dtypes: float64(17), int64(2), object(1)
memory usage: 18.1+ KB
```

In [4]:

```
1 b=a.fillna(method='ffill')
2 b
```

Out[4]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
0	1817	WEST RAJASTHAN	1901	6.7	0.0	1.1	0.0	6.1	3.0	79.0	59.2	1.0	2.1
1	1818	WEST RAJASTHAN	1902	0.0	0.0	0.0	0.5	4.0	49.1	27.0	71.3	41.8	1.8
2	1819	WEST RAJASTHAN	1903	1.7	1.3	5.5	0.0	4.2	2.7	154.8	87.1	49.3	0.1
3	1820	WEST RAJASTHAN	1904	3.8	2.9	16.3	0.7	11.4	14.6	39.8	45.6	21.4	1.4
4	1821	WEST RAJASTHAN	1905	6.3	4.8	0.7	1.3	0.3	4.9	30.1	0.6	64.5	0.0
...	...	...	...	...	...	...	...	...	...	...	...	...	...
110	1927	WEST RAJASTHAN	2011	0.0	11.8	1.5	1.5	7.8	24.4	88.5	166.8	116.3	0.1
111	1928	WEST RAJASTHAN	2012	0.5	0.0	0.0	9.5	10.4	5.3	40.4	166.7	92.0	1.9
112	1929	WEST RAJASTHAN	2013	8.6	21.8	4.2	3.1	1.7	37.6	104.5	138.2	58.7	10.1
113	1930	WEST RAJASTHAN	2014	0.8	2.2	4.7	8.4	23.0	13.8	94.3	69.6	84.9	0.5
114	1931	WEST RAJASTHAN	2015	1.4	0.9	30.3	25.2	15.5	53.2	234.6	60.5	35.7	1.1

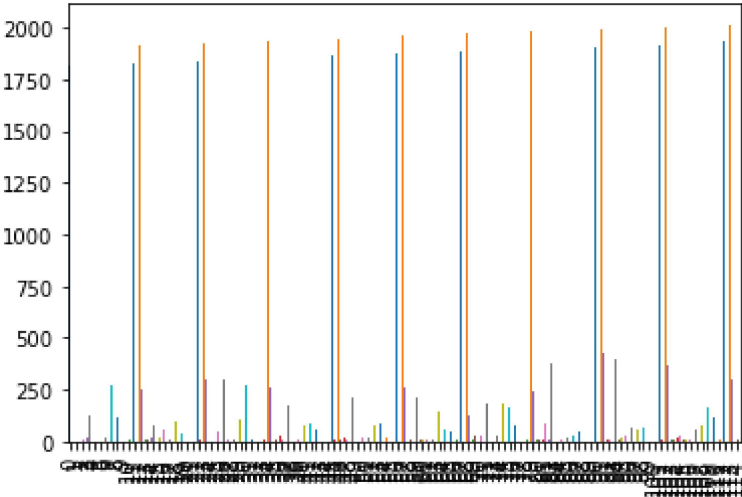
115 rows × 20 columns



In [5]:

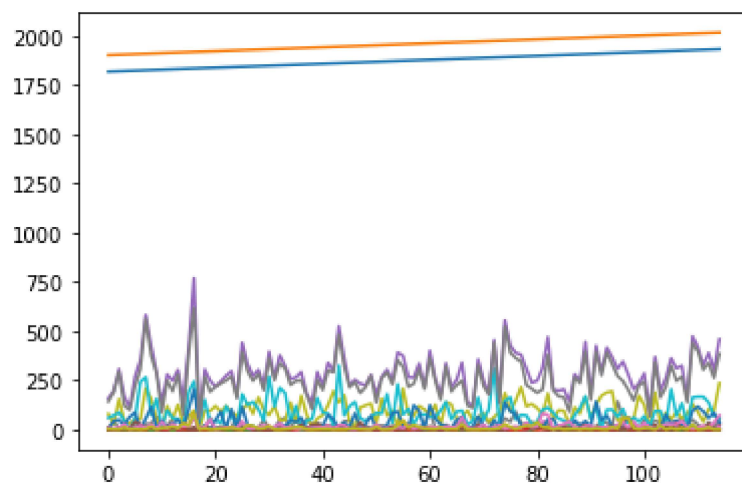
```
1 b.plot.bar(legend=None)
```

Out[5]: <AxesSubplot:>



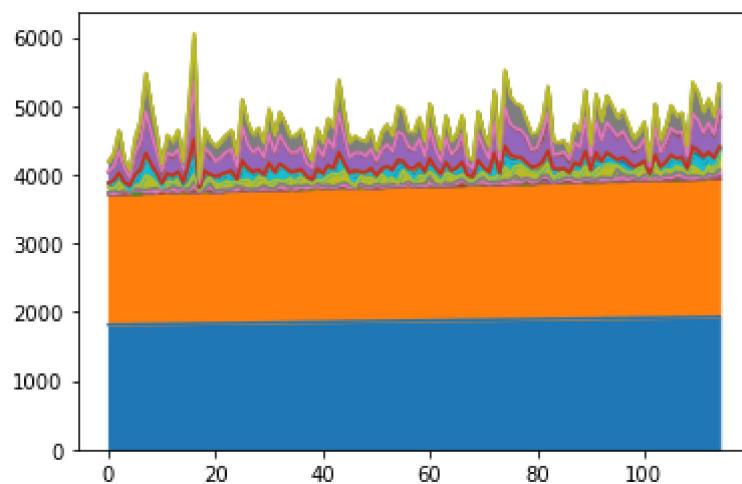
```
In [6]: 1 b.plot.line(legend=None)
```

```
Out[6]: <AxesSubplot:>
```



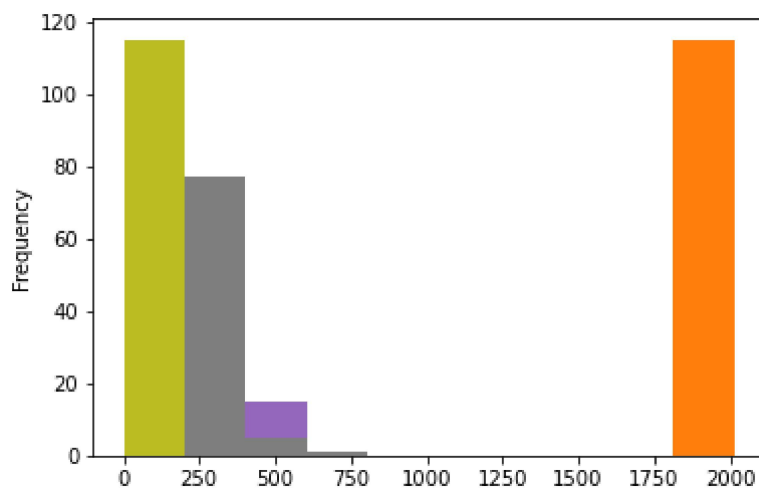
```
In [7]: 1 b.plot.area(legend=None)
```

```
Out[7]: <AxesSubplot:>
```



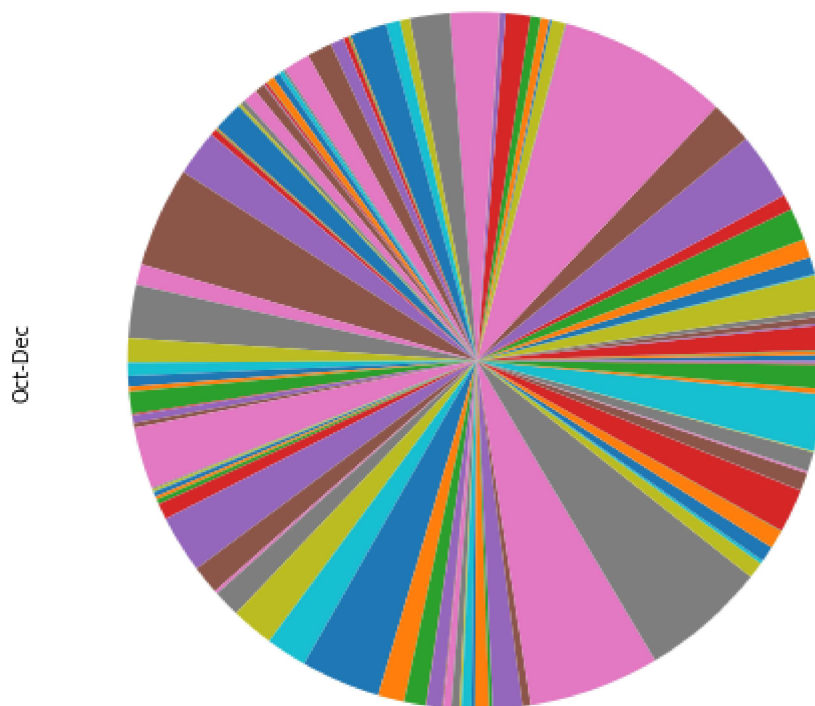
```
In [8]: 1 b.plot.hist(legend=None)
```

```
Out[8]: <AxesSubplot:ylabel='Frequency'>
```



```
In [10]: 1 b.plot.pie(y='Oct-Dec', figsize=(8,8), labels=None, legend=None)
```

```
Out[10]: <AxesSubplot:ylabel='Oct-Dec'>
```



```
In [ ]: 1
```

