Vijay(Book4) 04/08/2023

In [1]:
```python
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from sklearn.linear_model import LogisticRegression
from sklearn.preprocessing import StandardScaler
import re
from sklearn.datasets import load_digits
from sklearn.model_selection import train_test_split
```

In [2]:
```python
a=pd.read_csv(r"C:\Users\user\Downloads\Book4.csv")
a
```

Out[2]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
0	3542	COASTAL KARNATAKA	1901	1.8	0.6	10.7	52.4	81.6	960.9	991.2	606.4	108.0	1:
1	3543	COASTAL KARNATAKA	1902	3.2	0.3	4.9	10.2	54.6	698.4	1401.6	454.2	708.4	1.
2	3544	COASTAL KARNATAKA	1903	0.7	0.0	0.0	4.1	202.8	536.5	1405.5	593.8	304.4	1.
3	3545	COASTAL KARNATAKA	1904	2.4	0.0	4.8	23.7	93.2	1108.2	1070.0	465.6	245.3	1:
4	3546	COASTAL KARNATAKA	1905	0.0	0.2	0.0	6.4	83.1	767.3	777.3	586.9	172.9	2:
...	...	...	...	...	...	...	...	...	...	...	...	...	
110	3652	COASTAL KARNATAKA	2011	4.8	3.8	8.7	66.1	49.3	1018.4	1080.5	861.3	545.2	1'
111	3653	COASTAL KARNATAKA	2012	NaN	11.4	5.1	77.0	22.9	650.9	754.6	1027.6	382.0	1
112	3654	COASTAL KARNATAKA	2013	2.4	19.6	19.0	28.5	100.4	1153.0	1515.3	680.2	379.1	2
113	3655	COASTAL KARNATAKA	2014	0.0	0.3	1.9	40.5	181.9	507.0	1155.4	1121.0	379.3	2:
114	3656	COASTAL KARNATAKA	2015	1.4	1.0	32.3	72.2	150.3	735.3	930.9	575.2	260.3	2

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          114 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       114 non-null     float64
 16  Jan-Feb      114 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]:
```python
1 b=a.fillna(method='ffill')
2 b
```

Out[4]:

|	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	C
0	3542	COASTAL KARNATAKA	1901	1.8	0.6	10.7	52.4	81.6	960.9	991.2	606.4	108.0	1:
1	3543	COASTAL KARNATAKA	1902	3.2	0.3	4.9	10.2	54.6	698.4	1401.6	454.2	708.4	1.
2	3544	COASTAL KARNATAKA	1903	0.7	0.0	0.0	4.1	202.8	536.5	1405.5	593.8	304.4	1.
3	3545	COASTAL KARNATAKA	1904	2.4	0.0	4.8	23.7	93.2	1108.2	1070.0	465.6	245.3	1:
4	3546	COASTAL KARNATAKA	1905	0.0	0.2	0.0	6.4	83.1	767.3	777.3	586.9	172.9	2:
...	...	...	...	...	...	...	...	...	...	...	...	...	
110	3652	COASTAL KARNATAKA	2011	4.8	3.8	8.7	66.1	49.3	1018.4	1080.5	861.3	545.2	1;
111	3653	COASTAL KARNATAKA	2012	4.8	11.4	5.1	77.0	22.9	650.9	754.6	1027.6	382.0	1
112	3654	COASTAL KARNATAKA	2013	2.4	19.6	19.0	28.5	100.4	1153.0	1515.3	680.2	379.1	2
113	3655	COASTAL KARNATAKA	2014	0.0	0.3	1.9	40.5	181.9	507.0	1155.4	1121.0	379.3	2:
114	3656	COASTAL KARNATAKA	2015	1.4	1.0	32.3	72.2	150.3	735.3	930.9	575.2	260.3	2

115 rows × 20 columns

In [5]:
```python
1 b.plot.bar(legend=None)
```

Out[5]: <AxesSubplot:>
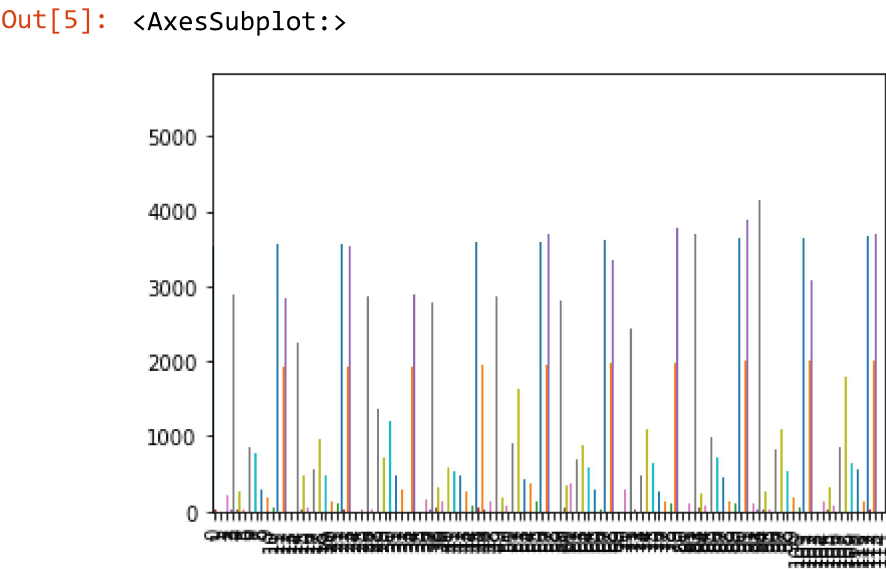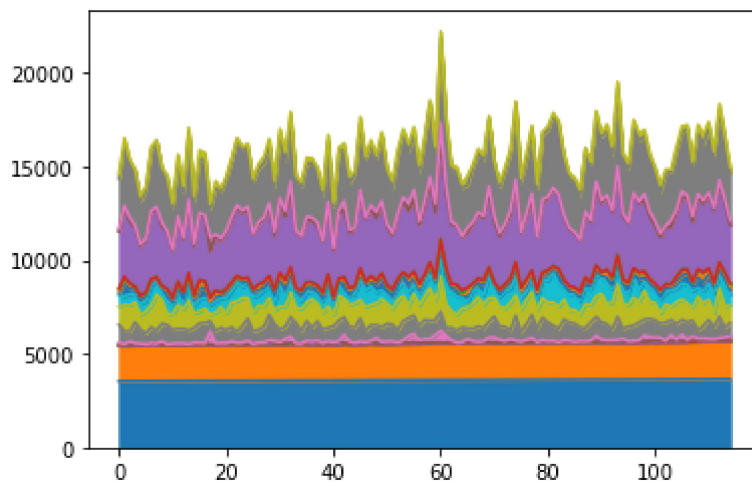
In [6]:   1   `b.plot.line(legend=None)`

Out[6]:   `<AxesSubplot:>`
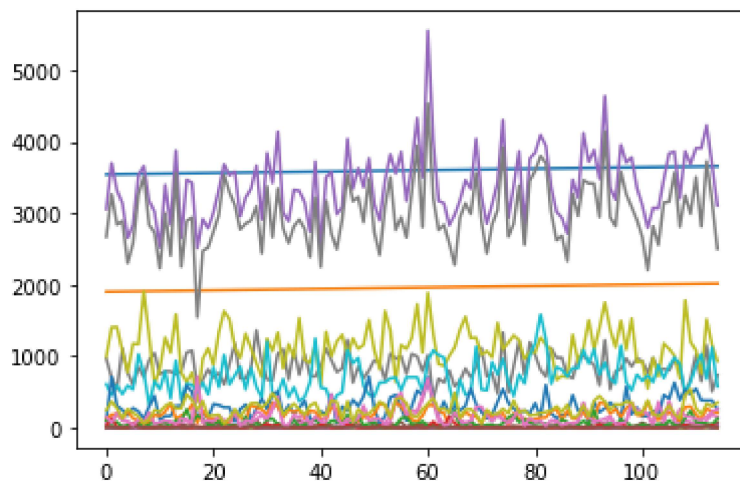
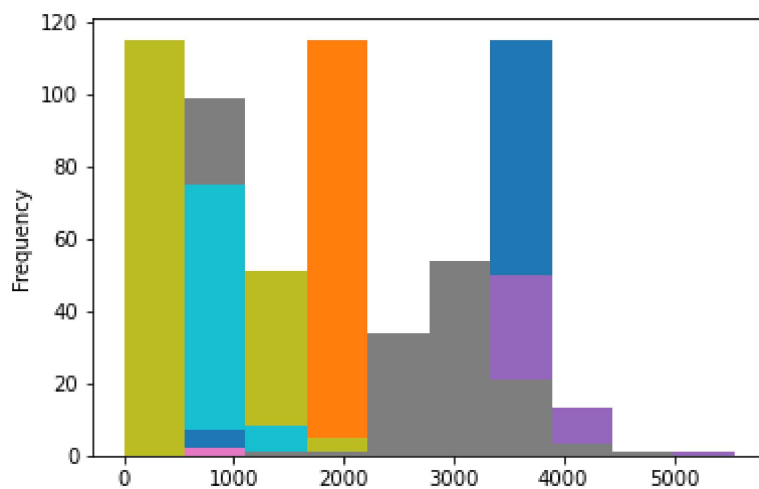In [7]:   1   `b.plot.area(legend=None)`

Out[7]:   `<AxesSubplot:>`

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

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

In [9]: `1  b.plot.pie(y='FEB',figsize=(8,8),labels=None,legend=None)`

Out[9]: `<AxesSubplot:ylabel='FEB'>`