

Vijay(Book22) 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\Book22.csv")
2 a

```

Out[2]:

| | index | SUBDIVISION | YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OC |
|-----|-------|------------------|------|-------|-------|-------|------|------|-------|-------|-------|-------|-----|
| 0 | 1587 | HIMACHAL PRADESH | 1901 | 137.8 | 174.5 | 75.0 | 19.2 | 89.6 | 32.7 | 280.5 | 459.7 | 53.0 | 3. |
| 1 | 1588 | HIMACHAL PRADESH | 1902 | 6.5 | 27.0 | 104.4 | 76.2 | 61.3 | 78.8 | 258.6 | 199.3 | 113.4 | 23. |
| 2 | 1589 | HIMACHAL PRADESH | 1903 | 76.5 | 21.4 | 213.7 | 25.4 | 54.7 | 32.2 | 157.7 | 256.5 | 107.9 | 5. |
| 3 | 1590 | HIMACHAL PRADESH | 1904 | 79.3 | 22.4 | 131.7 | 48.0 | 90.3 | 33.1 | 241.1 | 184.3 | 56.4 | 51. |
| 4 | 1591 | HIMACHAL PRADESH | 1905 | 81.3 | 76.8 | 160.2 | 39.3 | 50.4 | 43.6 | 191.1 | 132.8 | 119.1 | 0. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | . |
| 110 | 1697 | HIMACHAL PRADESH | 2011 | 43.9 | 97.4 | 49.7 | 62.4 | 45.1 | 118.3 | 177.7 | 380.2 | 120.3 | 6. |
| 111 | 1698 | HIMACHAL PRADESH | 2012 | 92.3 | 51.3 | 28.4 | 55.9 | 9.4 | 31.1 | 241.5 | 280.6 | 133.1 | 3. |
| 112 | 1699 | HIMACHAL PRADESH | 2013 | 79.9 | 182.6 | 76.6 | 28.9 | 32.6 | 233.6 | 208.8 | 240.0 | 65.8 | 21. |
| 113 | 1700 | HIMACHAL PRADESH | 2014 | 69.6 | 124.9 | 125.2 | 60.6 | 68.9 | 51.7 | 203.6 | 146.7 | 84.6 | 19. |
| 114 | 1701 | HIMACHAL PRADESH | 2015 | 67.2 | 156.6 | 192.5 | 84.9 | 45.0 | 85.8 | 249.9 | 195.9 | 75.5 | 17. |

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]:

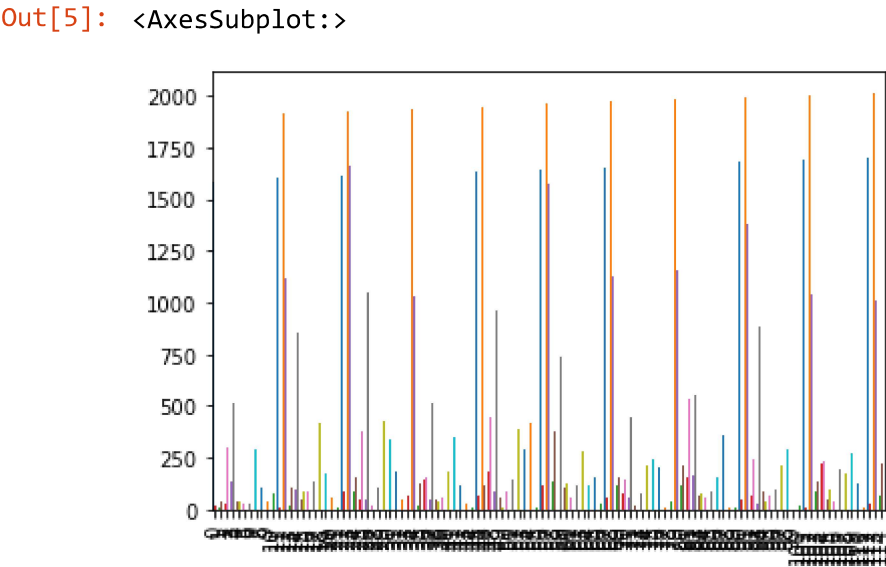
| | index | SUBDIVISION | YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OC |
|-----|-------|------------------|------|-------|-------|-------|------|------|-------|-------|-------|-------|-----|
| 0 | 1587 | HIMACHAL PRADESH | 1901 | 137.8 | 174.5 | 75.0 | 19.2 | 89.6 | 32.7 | 280.5 | 459.7 | 53.0 | 3. |
| 1 | 1588 | HIMACHAL PRADESH | 1902 | 6.5 | 27.0 | 104.4 | 76.2 | 61.3 | 78.8 | 258.6 | 199.3 | 113.4 | 23. |
| 2 | 1589 | HIMACHAL PRADESH | 1903 | 76.5 | 21.4 | 213.7 | 25.4 | 54.7 | 32.2 | 157.7 | 256.5 | 107.9 | 5. |
| 3 | 1590 | HIMACHAL PRADESH | 1904 | 79.3 | 22.4 | 131.7 | 48.0 | 90.3 | 33.1 | 241.1 | 184.3 | 56.4 | 51. |
| 4 | 1591 | HIMACHAL PRADESH | 1905 | 81.3 | 76.8 | 160.2 | 39.3 | 50.4 | 43.6 | 191.1 | 132.8 | 119.1 | 0. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | . |
| 110 | 1697 | HIMACHAL PRADESH | 2011 | 43.9 | 97.4 | 49.7 | 62.4 | 45.1 | 118.3 | 177.7 | 380.2 | 120.3 | 6. |
| 111 | 1698 | HIMACHAL PRADESH | 2012 | 92.3 | 51.3 | 28.4 | 55.9 | 9.4 | 31.1 | 241.5 | 280.6 | 133.1 | 3. |
| 112 | 1699 | HIMACHAL PRADESH | 2013 | 79.9 | 182.6 | 76.6 | 28.9 | 32.6 | 233.6 | 208.8 | 240.0 | 65.8 | 21. |
| 113 | 1700 | HIMACHAL PRADESH | 2014 | 69.6 | 124.9 | 125.2 | 60.6 | 68.9 | 51.7 | 203.6 | 146.7 | 84.6 | 19. |
| 114 | 1701 | HIMACHAL PRADESH | 2015 | 67.2 | 156.6 | 192.5 | 84.9 | 45.0 | 85.8 | 249.9 | 195.9 | 75.5 | 17. |

115 rows × 20 columns



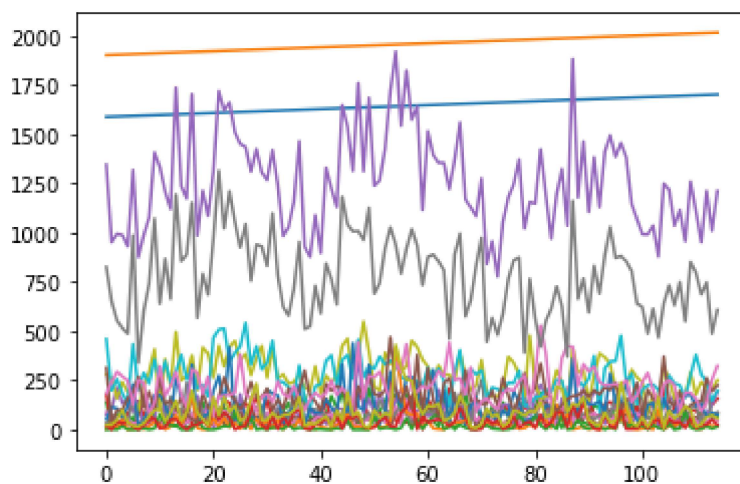
In [5]:

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



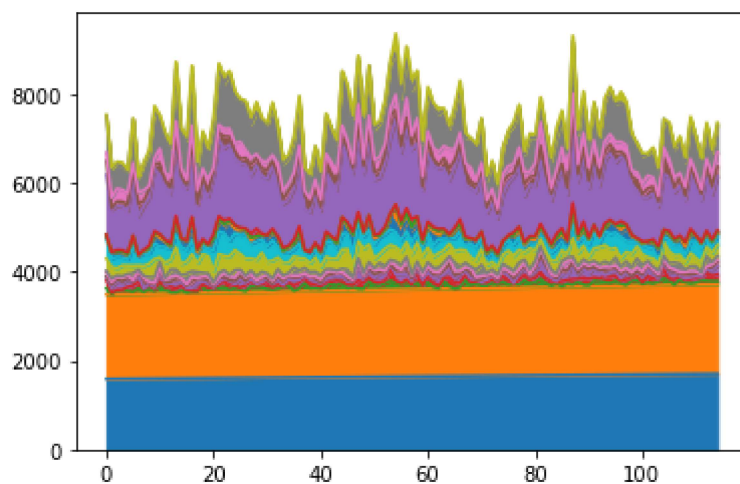
```
In [6]: 1 b.plot.line(legend=None)
```

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



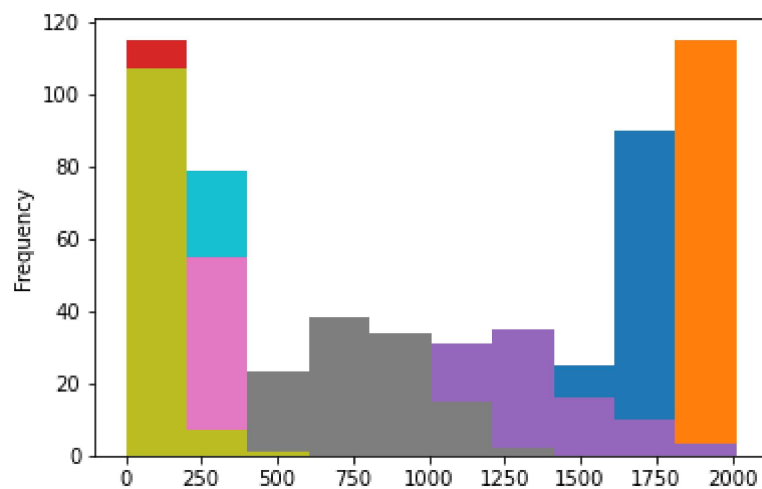
```
In [7]: 1 b.plot.area(legend=None)
```

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



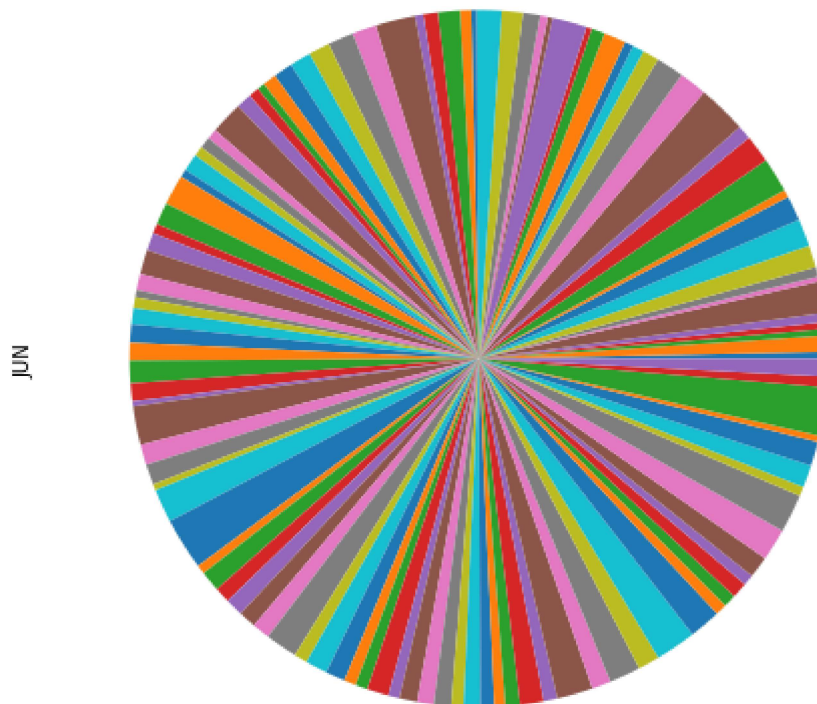
```
In [8]: 1 b.plot.hist(legend=None)
```

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



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

```
Out[10]: <AxesSubplot:ylabel='JUN'>
```



```
In [ ]: 1
```

