

Vijay(Book23) 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\Book23.csv")
2 a
```

Out[2]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
0	1357	HARYANA DELHI & CHANDIGARH	1901	35.4	28.9	11.1	0.0	5.1	13.2	126.4	151.5	10.5	2.0
1	1358	HARYANA DELHI & CHANDIGARH	1902	0.0	0.7	2.9	10.2	15.8	74.6	149.3	97.1	59.8	9.3
2	1359	HARYANA DELHI & CHANDIGARH	1903	14.7	0.5	2.3	0.5	8.5	8.6	151.6	138.2	97.7	4.0
3	1360	HARYANA DELHI & CHANDIGARH	1904	7.6	0.7	48.0	0.5	29.3	34.3	109.7	162.9	102.3	1.5
4	1361	HARYANA DELHI & CHANDIGARH	1905	44.8	20.8	14.0	1.3	7.4	20.1	93.6	23.1	92.6	0.0
...
110	1467	HARYANA DELHI & CHANDIGARH	2011	0.7	26.7	6.9	8.9	28.7	94.4	85.0	127.3	133.1	0.0
111	1468	HARYANA DELHI & CHANDIGARH	2012	8.2	0.2	0.1	11.8	3.8	5.3	68.1	196.6	90.7	2.4
112	1469	HARYANA DELHI & CHANDIGARH	2013	21.1	52.2	5.3	3.3	1.4	62.1	96.5	161.9	42.8	10.9
113	1470	HARYANA DELHI & CHANDIGARH	2014	13.0	17.3	26.8	7.5	20.3	25.9	72.3	34.8	67.3	10.5
114	1471	HARYANA DELHI & CHANDIGARH	2015	12.4	6.6	71.8	34.8	8.4	43.7	130.3	89.2	32.1	3.7

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

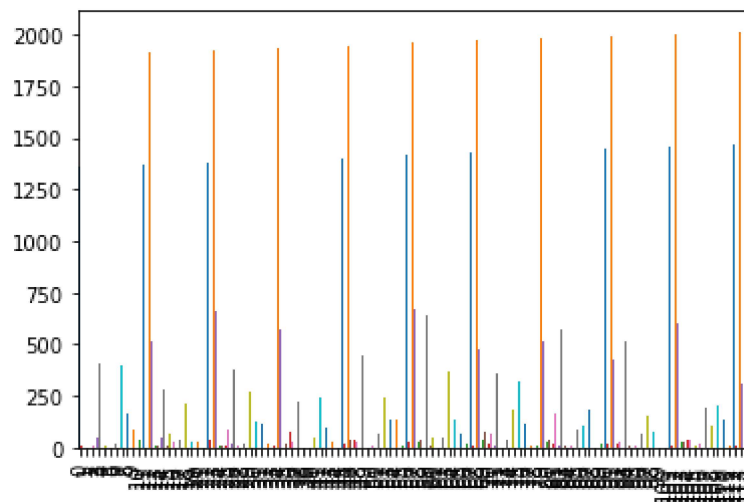
Out[4]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
0	1357	HARYANA DELHI & CHANDIGARH	1901	35.4	28.9	11.1	0.0	5.1	13.2	126.4	151.5	10.5	2.0
1	1358	HARYANA DELHI & CHANDIGARH	1902	0.0	0.7	2.9	10.2	15.8	74.6	149.3	97.1	59.8	9.3
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...
110	1467	HARYANA DELHI & CHANDIGARH	2011	0.7	26.7	6.9	8.9	28.7	94.4	85.0	127.3	133.1	0.0
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115 rows × 20 columns

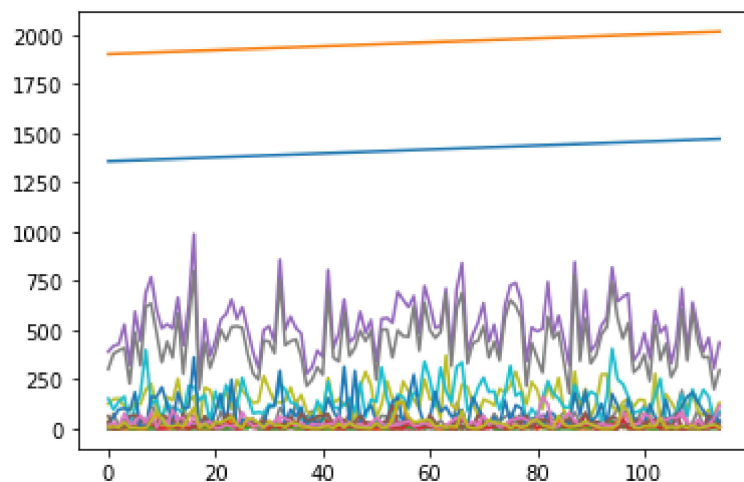
```
In [5]: 1 b.plot.bar(legend=None)
```

```
Out[5]: <AxesSubplot:>
```



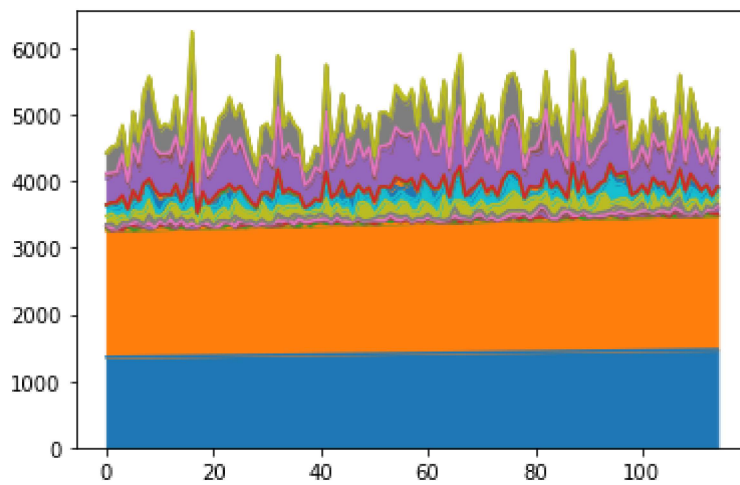
```
In [6]: 1 b.plot.line(legend=None)
```

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



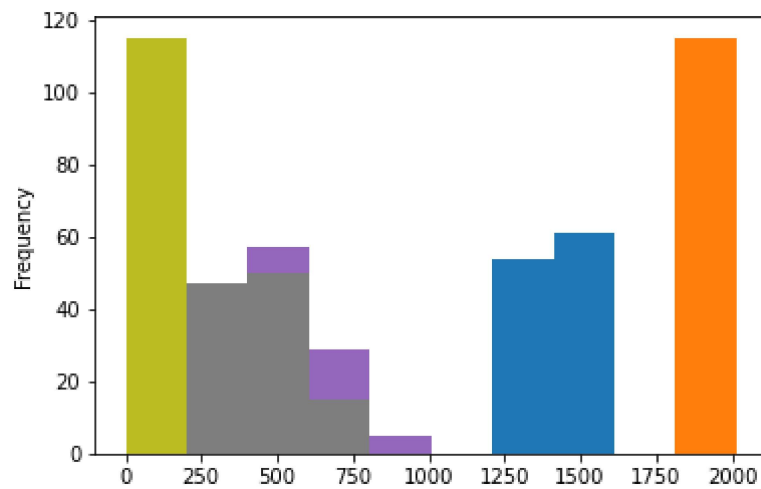
```
In [7]: 1 b.plot.area(legend=None)
```

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



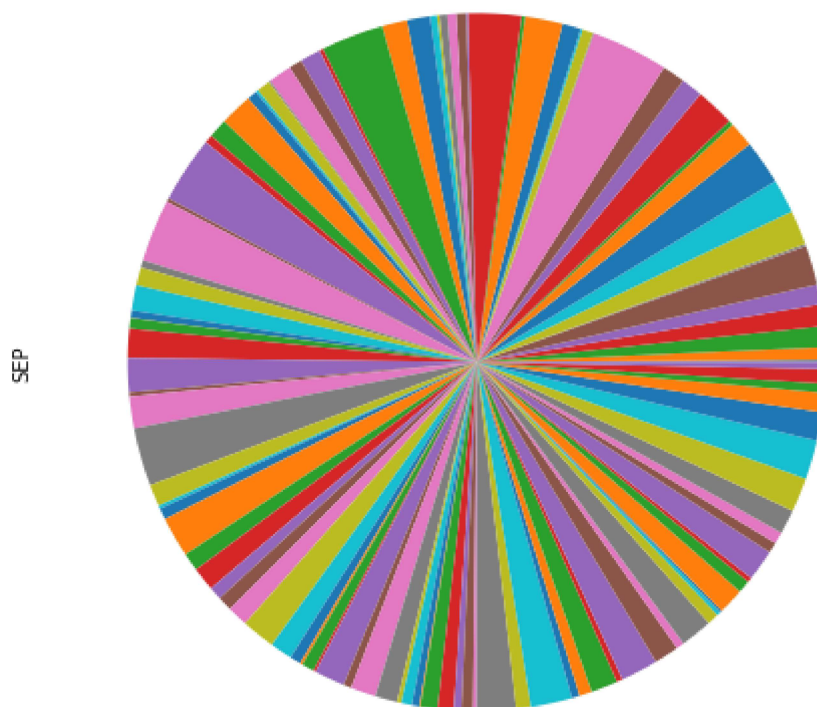
```
In [8]: 1 b.plot.hist(legend=None)
```

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



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

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



```
In [ ]: 1
```