

Vijay(Book14) 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\Book14.csv")
        2 a
```

Out[2]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	O
0	2507	KONKAN & GOA	1901	5.6	0.1	0.4	35.7	19.9	746.1	1075.5	748.0	117.4	3
1	2508	KONKAN & GOA	1902	0.3	0.0	0.0	0.4	7.6	428.2	943.6	515.1	613.8	7
2	2509	KONKAN & GOA	1903	0.0	0.0	0.1	0.0	201.1	470.5	1298.6	673.9	285.1	14
3	2510	KONKAN & GOA	1904	0.0	0.1	6.6	6.3	4.6	975.8	771.7	321.3	217.0	9
4	2511	KONKAN & GOA	1905	0.1	0.1	0.0	0.4	8.6	293.7	770.6	305.5	208.3	8
...
110	2617	KONKAN & GOA	2011	0.0	0.0	0.0	3.4	1.1	857.0	1384.1	987.9	468.3	12
111	2618	KONKAN & GOA	2012	0.0	0.0	0.0	0.6	1.1	633.0	928.5	762.5	515.3	17
112	2619	KONKAN & GOA	2013	1.8	5.4	0.1	0.1	18.5	1028.3	1478.5	497.6	340.7	14
113	2620	KONKAN & GOA	2014	1.3	5.3	1.8	0.7	21.3	238.2	1293.2	658.0	419.5	9
114	2621	KONKAN & GOA	2015	2.7	0.0	36.8	3.6	11.3	764.0	526.5	377.3	240.9	9

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	O
0	2507	KONKAN & GOA	1901	5.6	0.1	0.4	35.7	19.9	746.1	1075.5	748.0	117.4	3
1	2508	KONKAN & GOA	1902	0.3	0.0	0.0	0.4	7.6	428.2	943.6	515.1	613.8	7
2	2509	KONKAN & GOA	1903	0.0	0.0	0.1	0.0	201.1	470.5	1298.6	673.9	285.1	14
3	2510	KONKAN & GOA	1904	0.0	0.1	6.6	6.3	4.6	975.8	771.7	321.3	217.0	9
4	2511	KONKAN & GOA	1905	0.1	0.1	0.0	0.4	8.6	293.7	770.6	305.5	208.3	8
...
110	2617	KONKAN & GOA	2011	0.0	0.0	0.0	3.4	1.1	857.0	1384.1	987.9	468.3	12
111	2618	KONKAN & GOA	2012	0.0	0.0	0.0	0.6	1.1	633.0	928.5	762.5	515.3	17
112	2619	KONKAN & GOA	2013	1.8	5.4	0.1	0.1	18.5	1028.3	1478.5	497.6	340.7	14
113	2620	KONKAN & GOA	2014	1.3	5.3	1.8	0.7	21.3	238.2	1293.2	658.0	419.5	9
114	2621	KONKAN & GOA	2015	2.7	0.0	36.8	3.6	11.3	764.0	526.5	377.3	240.9	9

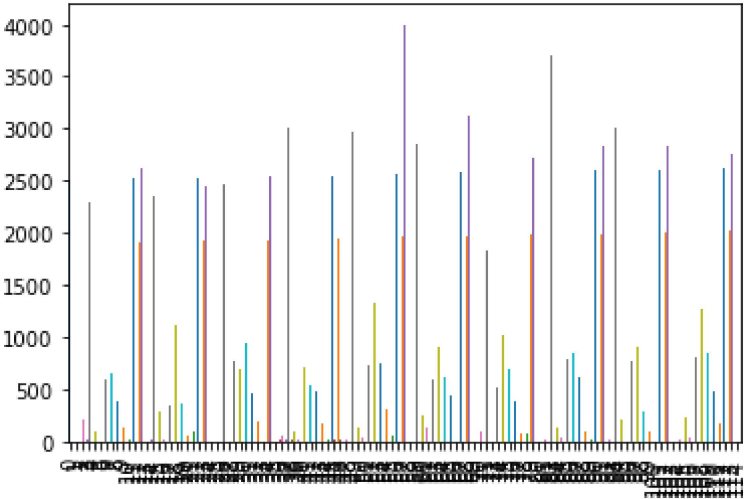
115 rows × 20 columns



In [5]:

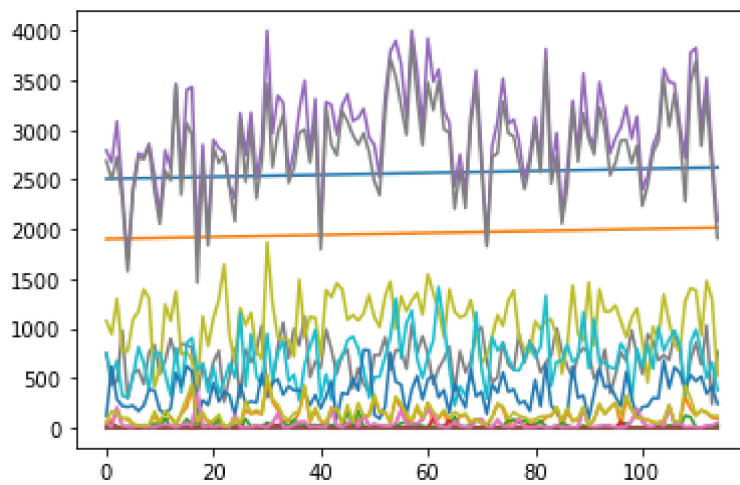
```
1 b.plot.bar(legend=None)
```

Out[5]: <AxesSubplot:>



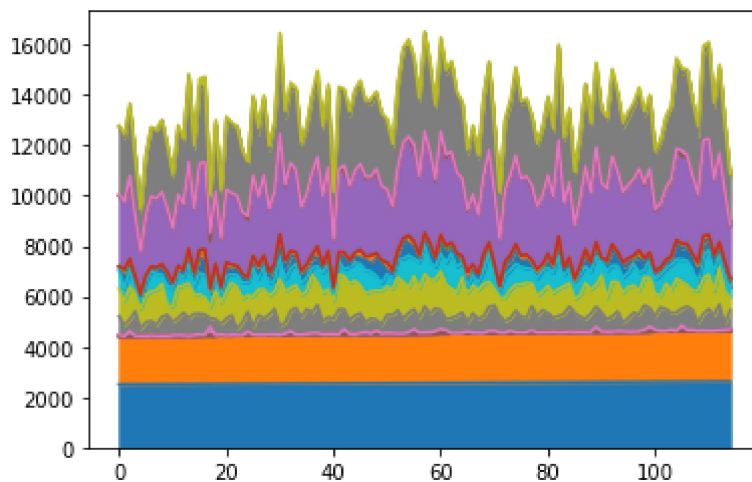
```
In [6]: 1 b.plot.line(legend=None)
```

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



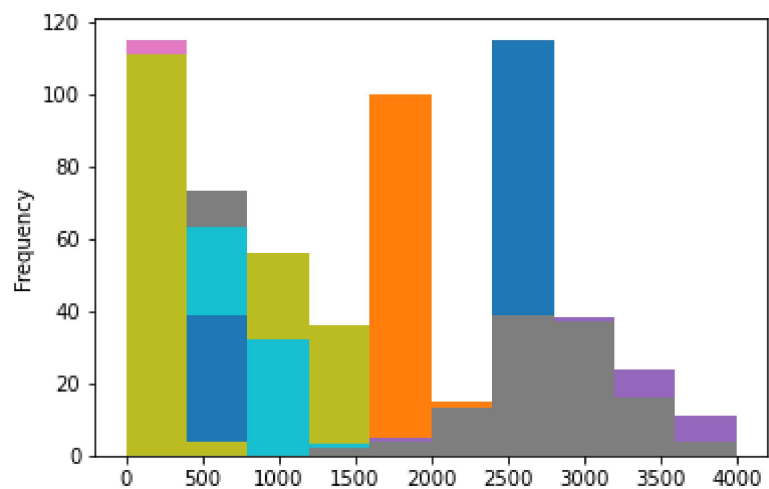
```
In [7]: 1 b.plot.area(legend=None)
```

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



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

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



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

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



```
In [ ]: 1
```

