

## Vijay(Book17) 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\Book17.csv")

2 a

Out[2]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
0	2162	EAST MADHYA PRADESH	1901	48.5	38.1	15.7	10.7	6.2	61.0	367.5	589.2	189.9	5.9
1	2163	EAST MADHYA PRADESH	1902	14.9	8.9	0.0	3.6	2.7	28.0	411.9	227.0	236.6	17.0
2	2164	EAST MADHYA PRADESH	1903	5.6	2.9	0.3	0.9	37.5	67.5	261.4	366.7	257.4	177.9
3	2165	EAST MADHYA PRADESH	1904	2.0	15.3	48.2	0.0	8.6	109.9	443.2	316.6	135.6	44.8
4	2166	EAST MADHYA PRADESH	1905	15.9	8.0	14.3	12.3	10.2	34.4	292.4	243.3	250.9	2.9
...	...	...	...	...	...	...	...	...	...	...	...	...	...
110	2272	EAST MADHYA PRADESH	2011	0.6	1.9	0.3	7.1	4.7	332.5	323.6	326.9	276.5	1.1
111	2273	EAST MADHYA PRADESH	2012	39.4	0.7	0.6	1.1	1.2	67.8	398.9	351.7	172.6	12.7
112	2274	EAST MADHYA PRADESH	2013	2.0	43.4	14.1	9.5	0.3	311.9	456.2	480.8	78.0	124.2
113	2275	EAST MADHYA PRADESH	2014	32.1	49.7	17.8	5.1	2.5	91.8	283.4	231.8	139.6	56.4
114	2276	EAST MADHYA PRADESH	2015	37.3	11.0	73.4	25.8	6.3	139.2	262.2	272.1	71.6	38.2

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                   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

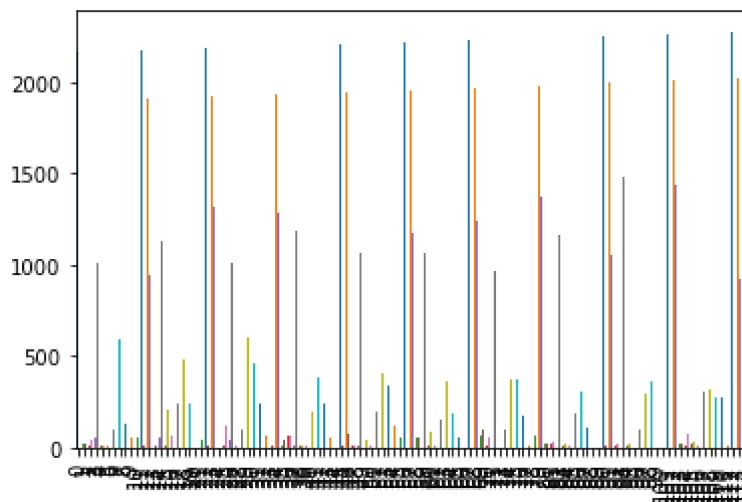
Out[4]:

	index	SUBDIVISION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
0	2162	EAST MADHYA PRADESH	1901	48.5	38.1	15.7	10.7	6.2	61.0	367.5	589.2	189.9	5.9
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...	...	...	...	...	...	...	...	...	...	...	...	...	...
110	2272	EAST MADHYA PRADESH	2011	0.6	1.9	0.3	7.1	4.7	332.5	323.6	326.9	276.5	1.1
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115 rows × 20 columns

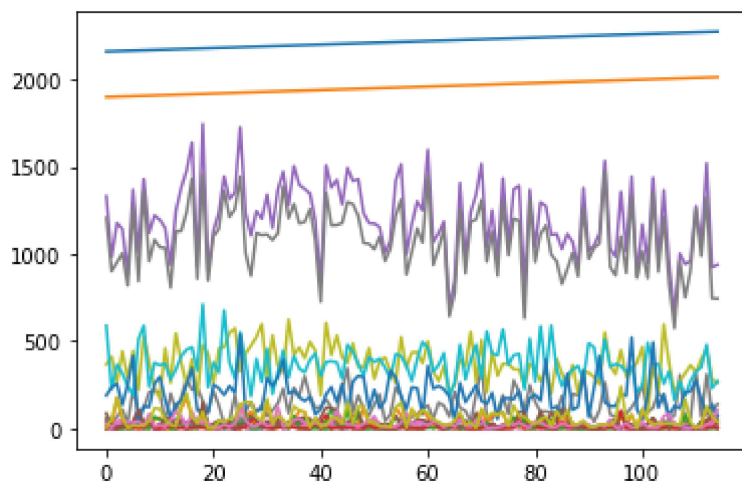
```
In [5]: 1 b.plot.bar(legend=None)
```

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



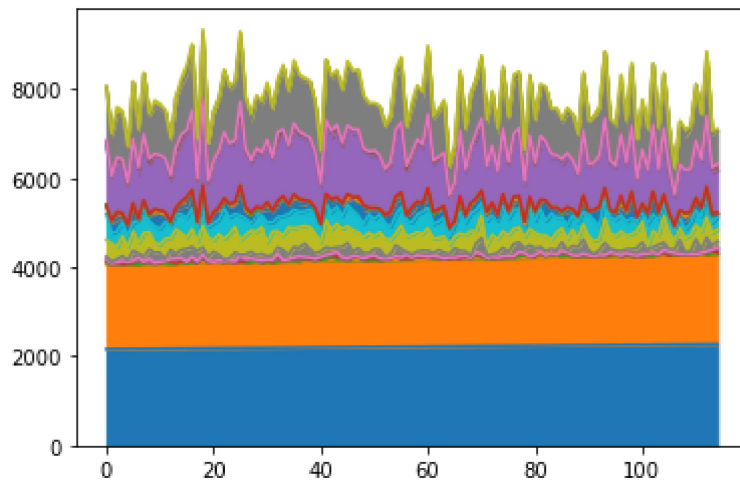
```
In [6]: 1 b.plot.line(legend=None)
```

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



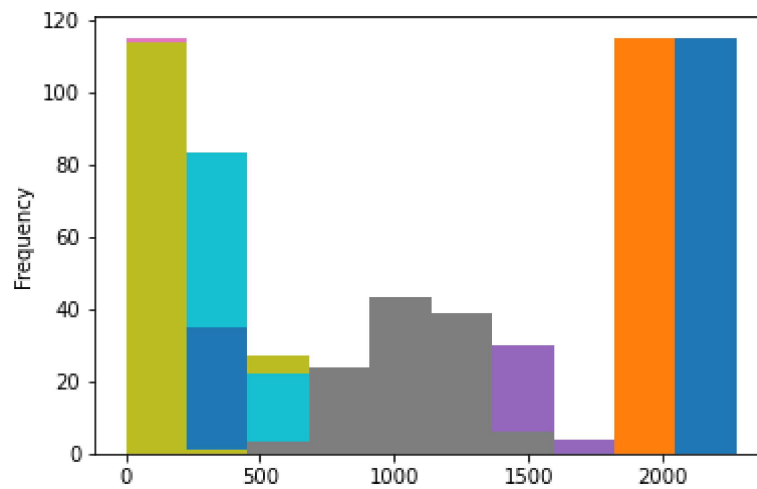
```
In [7]: 1 b.plot.area(legend=None)
```

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



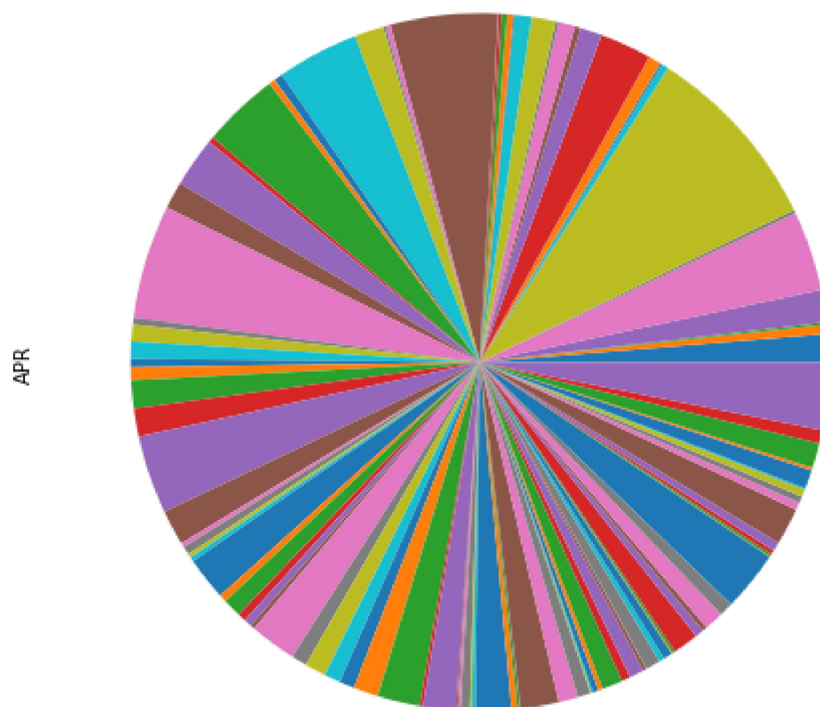
```
In [8]: 1 b.plot.hist(legend=None)
```

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



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

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



```
In [ ]: 1
```