```
%matplotlib inline
%config ZMQInteractiveShell.ast_node_interactivity='all'
%pprint
```

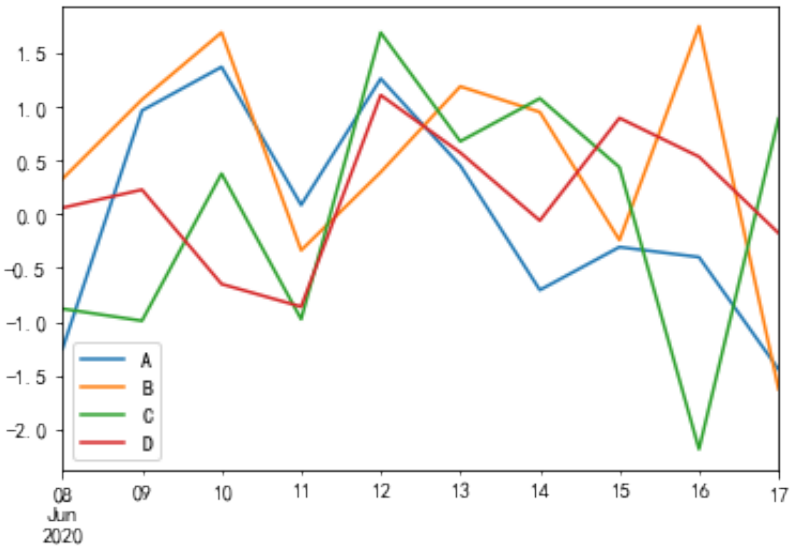
```
Pretty printing has been turned OFF
```

折线图

```
import pandas as pd
import numpy as np

# 模拟数据,创建10条样本4维特征(ABCD)的数据集,index用日期
df = pd.DataFrame(np.random.randn(10,4),index=pd.date_range('2020/06/0
8',periods=10),columns=list('ABCD'))
df
# 生成折线图
df.plot()
# df.plot(kind='bar')
# df.plot(kind='scatter')
```

	A	B	C	D
2020-06-08	-1.256140	0.331681	-0.880322	0.061060
2020-06-09	0.968628	1.071634	-0.992868	0.230597
2020-06-10	1.375745	1.697399	0.380643	-0.649762
2020-06-11	0.087308	-0.334914	-0.977338	-0.860840
2020-06-12	1.266327	0.393977	1.696335	1.112964
2020-06-13	0.456152	1.193928	0.681915	0.576355
2020-06-14	-0.705553	0.954845	1.081903	-0.057589
2020-06-15	-0.304646	-0.239415	0.439627	0.899465
2020-06-16	-0.398573	1.756117	-2.190107	0.538051
2020-06-17	-1.446475	-1.630590	0.894601	-0.174813

```
<matplotlib.axes._subplots.AxesSubplot object at 0x129dc4450>
```

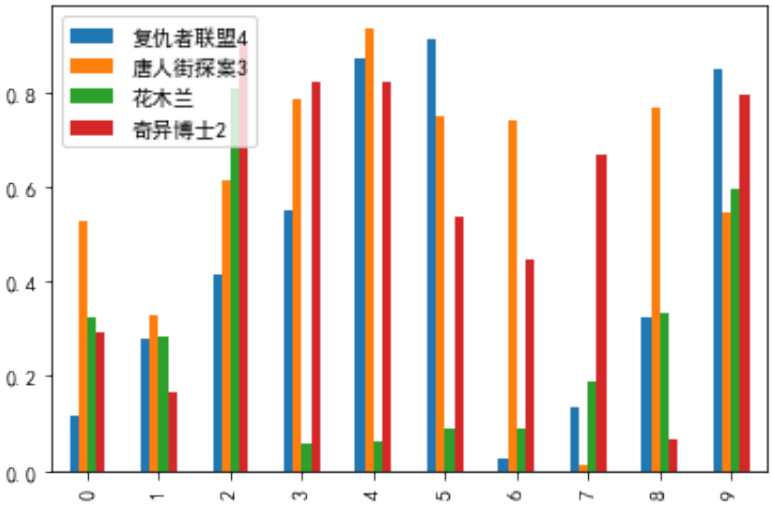


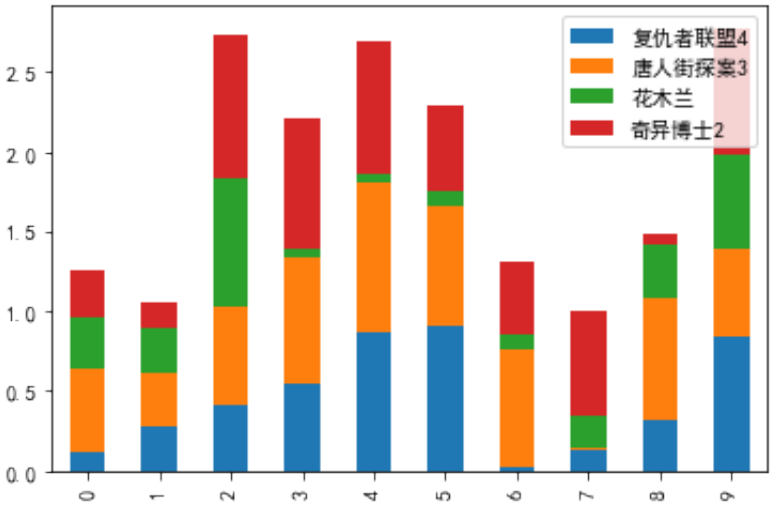
条形图

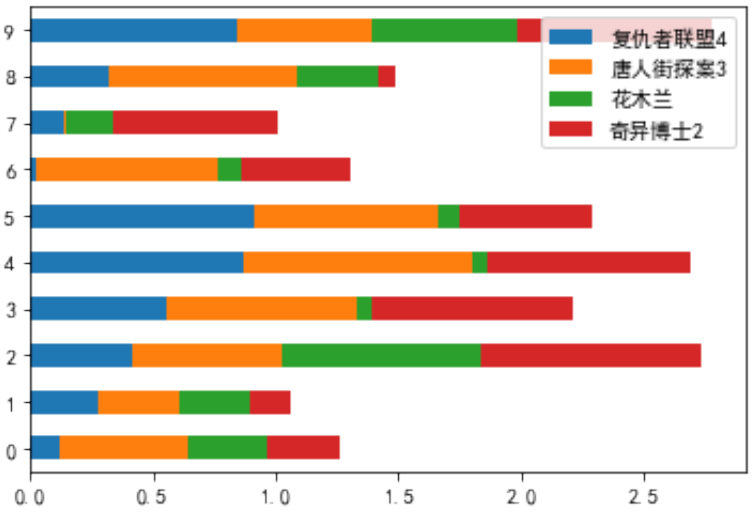
```
df = pd.DataFrame(np.random.rand(10,4),columns=['复仇者联盟4','唐人街探案3','花木兰','奇异博士2'])
df
#条形图做票房比较
df.plot.bar()
#生成一个堆积条形图
df.plot.bar(stacked=True)
#改变方向
df.plot.barh(stacked=True)
```

	复仇者联盟4	唐人街探案3	花木兰	奇异博士2
0	0.118044	0.526496	0.323379	0.293442
1	0.280432	0.328256	0.284089	0.167527
2	0.414533	0.611081	0.807015	0.901476
3	0.551647	0.783280	0.059502	0.820269
4	0.870089	0.936150	0.059633	0.823406
5	0.912574	0.747624	0.089175	0.537429
6	0.027621	0.739693	0.090274	0.447850
7	0.134759	0.013764	0.189735	0.669381
8	0.321824	0.764795	0.331842	0.066525
9	0.846412	0.544712	0.593776	0.795212

```
<matplotlib.axes._subplots.AxesSubplot object at 0x12c2e80d0>



<matplotlib.axes._subplots.AxesSubplot object at 0x12c3af210>



<matplotlib.axes._subplots.AxesSubplot object at 0x12c5282d0>
```


复仇者联盟4
唐人街探案3
花木兰
奇异博士2
0.0
0.2
0.4
0.6
0.8
0
1
2
3
4
5
6
7
8
9


复仇者联盟4
唐人街探案3
花木兰
奇异博士2
0.0
0.5
1.0
1.5
2.0
2.5
0
1
2
3
4
5
6
7
8
9


复仇者联盟4
唐人街探案3
花木兰
奇异博士2
0
1
2
3
4
5
6
7
8
9
0.0
0.5
1.0
1.5
2.0
2.5

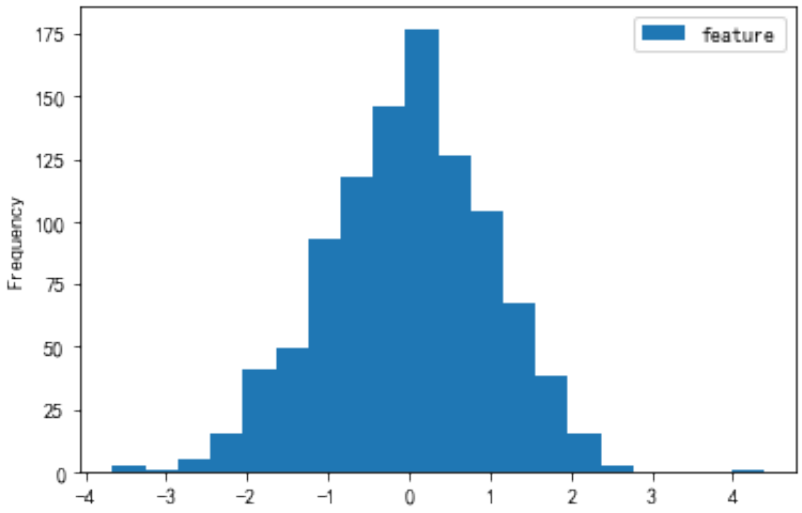
直方图

```
df = pd.DataFrame({'feature':np.random.randn(1000)})
df.info()
df.head(5)
df.plot.hist(bins=20)
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1000 entries, 0 to 999
Data columns (total 1 columns):
feature    1000 non-null float64
dtypes: float64(1)
memory usage: 7.9 KB
```

	feature
0	0.670657
1	-0.590187
2	-0.423085
3	-1.675163
4	-1.817425

```
<matplotlib.axes._subplots.AxesSubplot object at 0x12ec2f590>
```

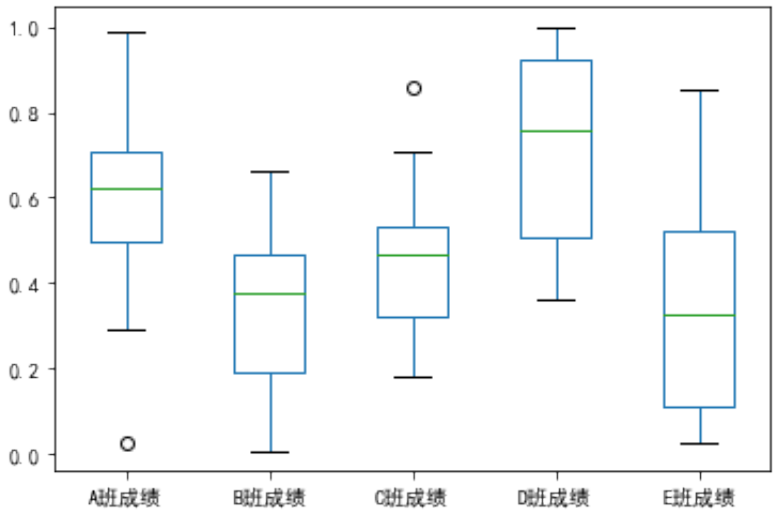


箱型图

```
df = pd.DataFrame(np.random.rand(10, 5), columns=['A班成绩', 'B班成绩',
'C班成绩', 'D班成绩', 'E班成绩'])
df.describe() #基本统计信息
df.plot.box()
```

	A班成绩	B班成绩	C班成绩	D班成绩	E班成绩
count	10.000000	10.000000	10.000000	10.000000	10.000000
mean	0.582264	0.340856	0.461718	0.719934	0.345009
std	0.274306	0.197198	0.211051	0.230717	0.278886
min	0.026729	0.008439	0.181963	0.361501	0.024241
25%	0.494674	0.190826	0.320654	0.508575	0.112023
50%	0.620649	0.374526	0.467427	0.759728	0.327723
75%	0.706988	0.468149	0.533545	0.925188	0.522213
max	0.987089	0.663396	0.860336	0.999177	0.850675

```
<matplotlib.axes._subplots.AxesSubplot object at 0x12c3e7990>
```

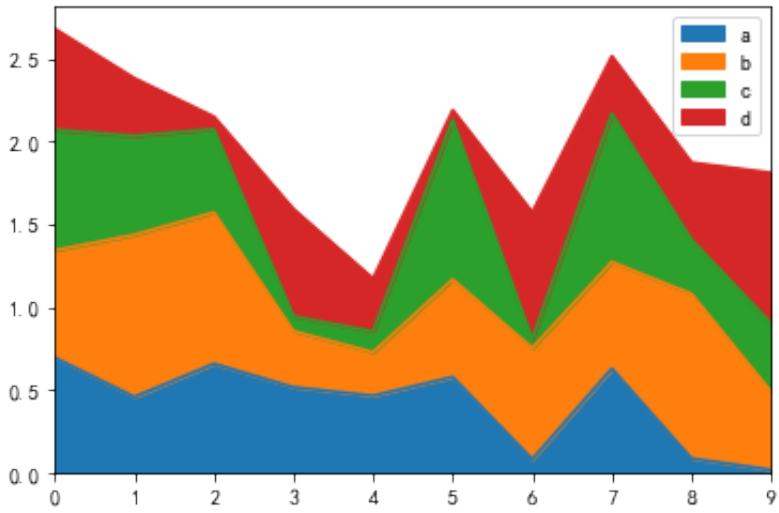


区域块图

```
df = pd.DataFrame(np.random.rand(10, 4), columns=['a', 'b', 'c', 'd'])
df.head()
df.plot.area()
```

	a	b	c	d
0	0.694434	0.647196	0.729172	0.610592
1	0.456321	0.979929	0.597875	0.348582
2	0.656594	0.914542	0.503719	0.075140
3	0.514629	0.338971	0.089659	0.648028
4	0.463233	0.263455	0.125294	0.319243

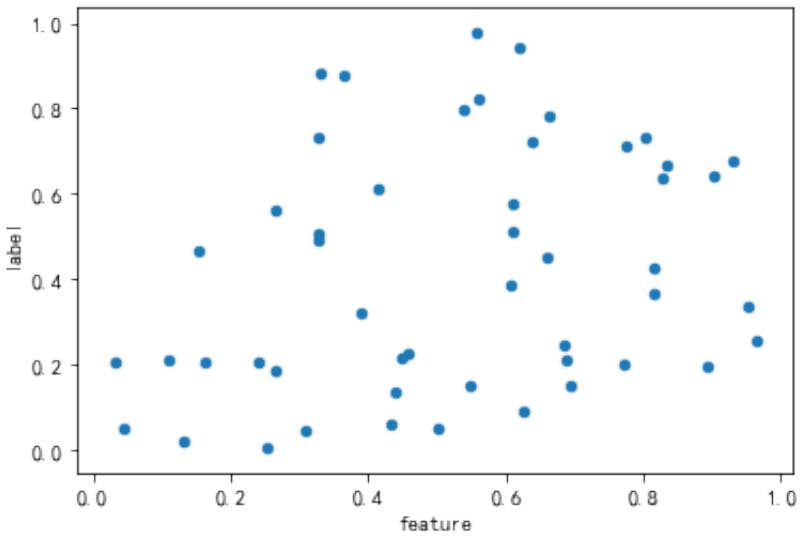
```
<matplotlib.axes._subplots.AxesSubplot object at 0x12c1fc0d0>
```



散点图

```
df = pd.DataFrame(np.random.rand(50, 2), columns=['feature', 'label'])
df.plot.scatter(x='feature', y='label')
```

```
<matplotlib.axes._subplots.AxesSubplot object at 0x12a3fa410>
```



饼状图

```
df = pd.DataFrame(np.random.randn(4,1),index=['奔跑吧','王牌对王牌','极限挑战','大侦探'],columns=['收视率'])
df.plot.pie(subplots=True)
```

```
array([<matplotlib.axes._subplots.AxesSubplot object at 0x12f0fb310>],
      dtype=object)
```