

# Matplotlib 20\_\_ Pandas Data Frame dan Matplotlib (Part 1)

June 9, 2022

## 1 Visualisasi Data yang tersimpan pada Pandas Data Frame (bagian 1)

Dalam sesi ini kita akan mempelajari cara untuk melakukan visualisasi data yang tersimpan pada Pandas Data Frame dengan Matplotlib.

### 1.1 1. Import Modules

```
[1]: %matplotlib inline
```

```
[2]: import matplotlib
import matplotlib.pyplot as plt
import pandas as pd

print(matplotlib.__version__)
print(pd.__version__)
```

3.3.4

1.2.4

### 1.2 2. Sample Dataset

```
[3]: df = pd.DataFrame({
    'nama': ['Cecep', 'Karti', 'Bejo', 'Tejo', 'Asep', 'Wati', 'Amat'],
    'usia': [23, 78, 22, 19, 45, 33, 20],
    'gender': ['L', 'P', 'L', 'L', 'L', 'P', 'L'],
    'propinsi': ['Jabar', 'Jatim', 'Jabar', 'Jatim', 'Jabar', 'Jateng',
    ↪ 'Jateng'],
    'n_anak': [2, 0, 0, 3, 2, 1, 4],
    'n_pets': [5, 1, 0, 5, 2, 2, 3]
})

df
```

```
[3]:      nama  usia gender propinsi  n_anak  n_pets
0  Cecep    23      L    Jabar      2      5
1  Karti    78      P    Jatim      0      1
```

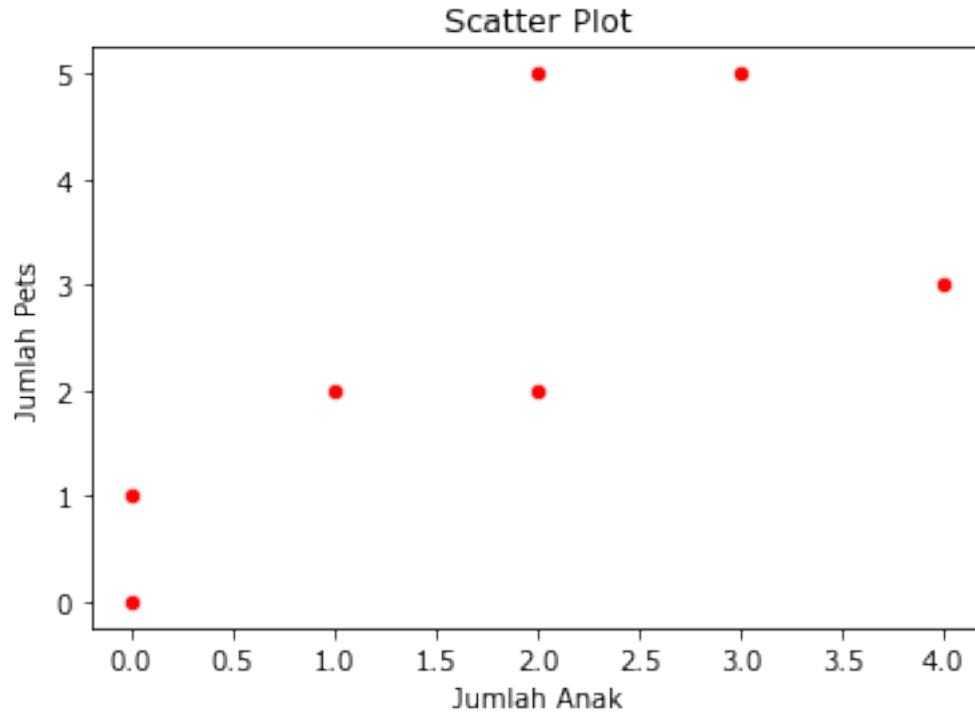
2	Bejo	22	L	Jabar	0	0
3	Tejo	19	L	Jatim	3	5
4	Asep	45	L	Jabar	2	2
5	Wati	33	P	Jateng	1	2
6	Amat	20	L	Jateng	4	3

### 1.3 3. Scatter Plot

```
[4]: df.plot(kind = 'scatter', x = 'n_anak', y='n_pets', color='red')

plt.title('Scatter Plot')
plt.xlabel('Jumlah Anak')
plt.ylabel('Jumlah Pets')

plt.show()
```

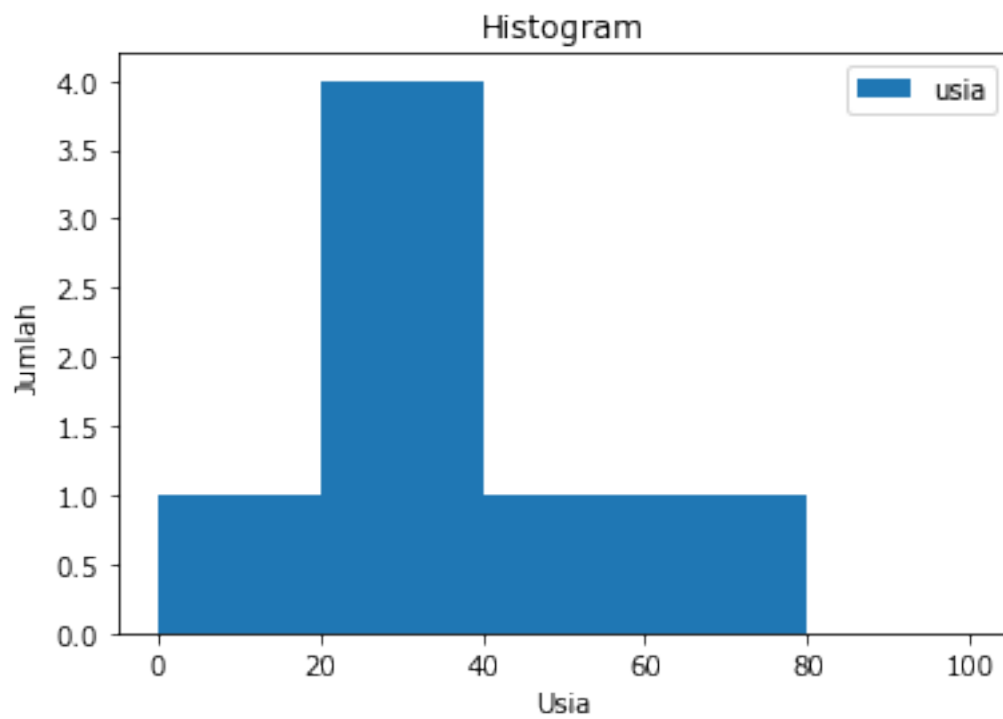


### 1.4 4. Histogram

```
[5]: df[['usia']].plot(kind = 'hist', bins = [0, 20, 40, 60, 80, 100])

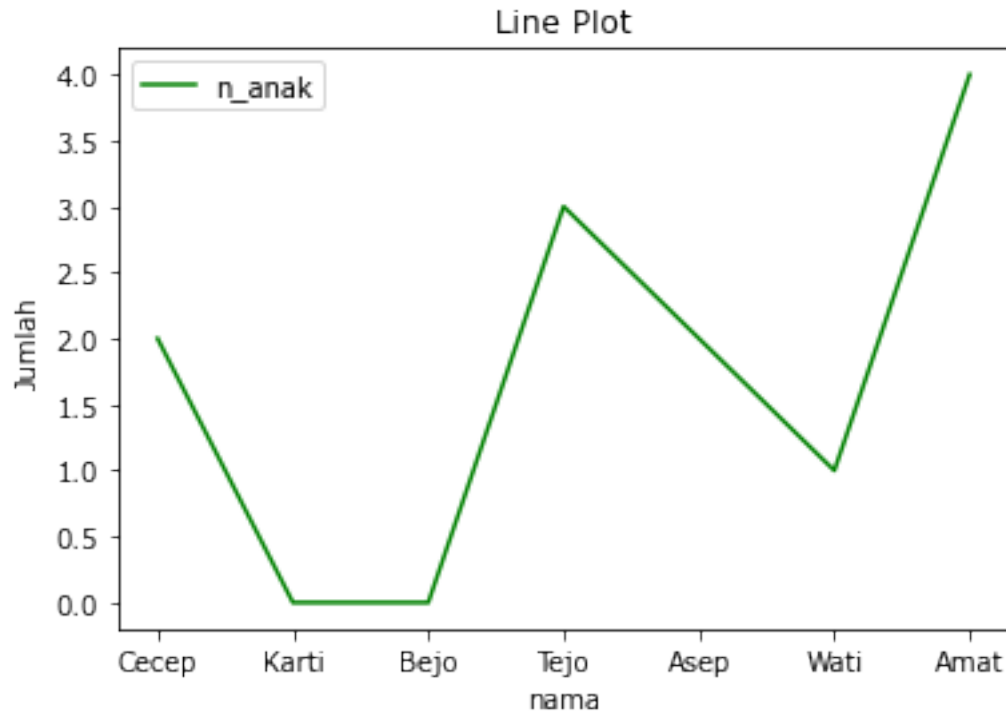
plt.title('Histogram')
plt.xlabel('Usia')
plt.ylabel('Jumlah')
```

```
plt.show()
```



## 1.5 5. Line Plot

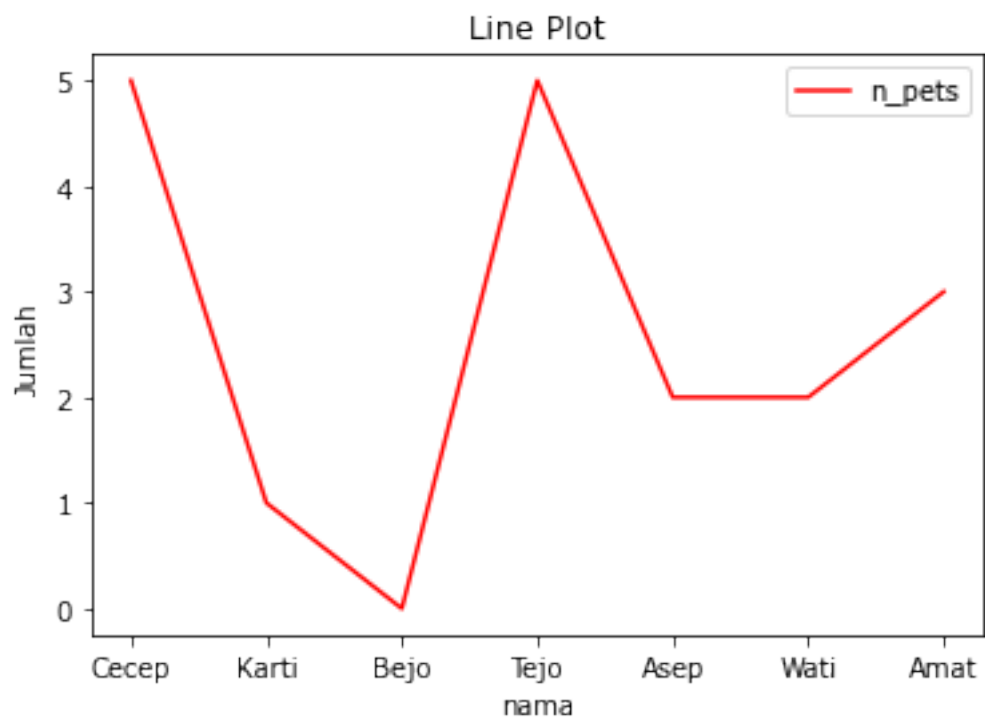
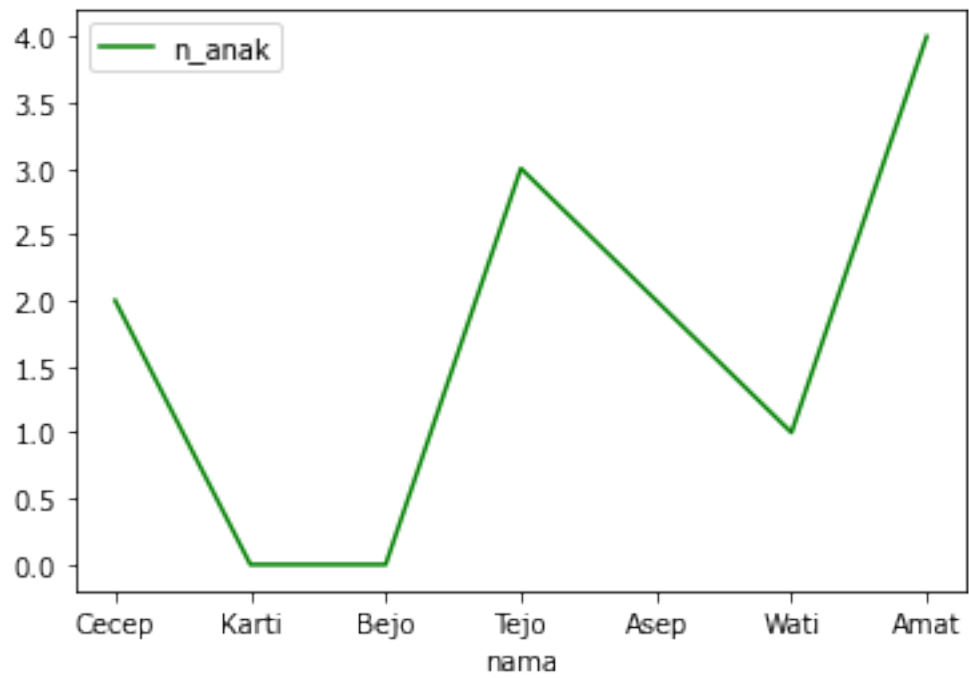
```
[6]: df.plot(kind='line', x='nama', y='n_anak', color='green')  
  
plt.title('Line Plot')  
plt.ylabel('Jumlah')  
  
plt.show()
```



## 1.6 6. Multiple Line Plot

```
[7]: df.plot(kind='line', x='nama', y='n_anak', color='green')
df.plot(kind='line', x='nama', y='n_pets', color='red')

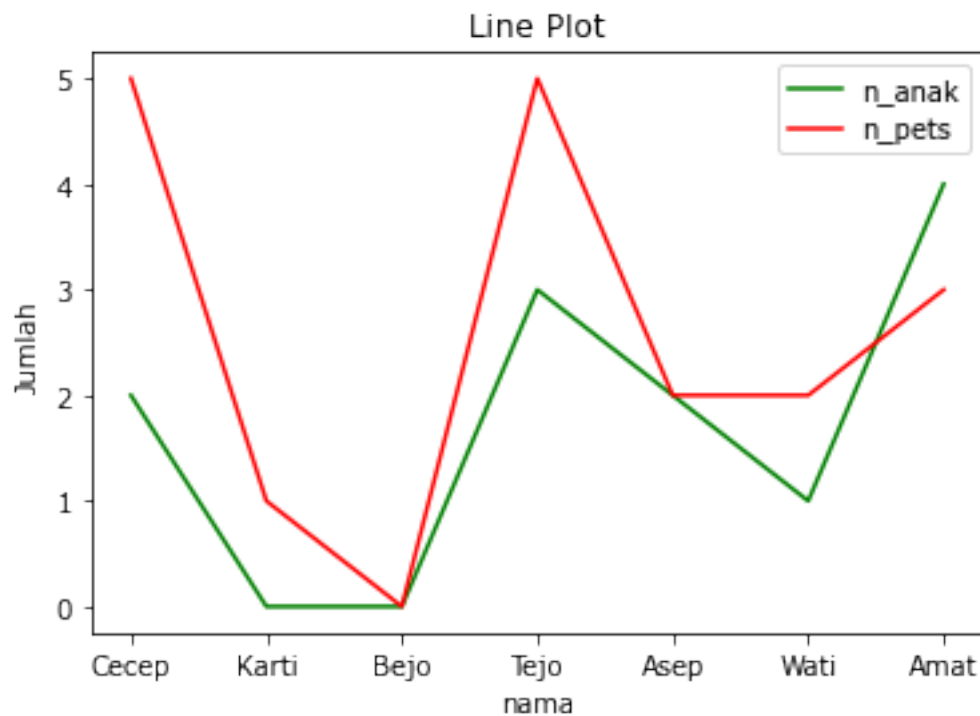
plt.title('Line Plot')
plt.ylabel('Jumlah')
plt.show()
```



```
[8]: ax=plt.gca()

df.plot(kind='line', x='nama', y='n_anak', color='green', ax=ax)
df.plot(kind='line', x='nama', y='n_pets', color='red', ax=ax)

plt.title('Line Plot')
plt.ylabel('Jumlah')
plt.show()
```

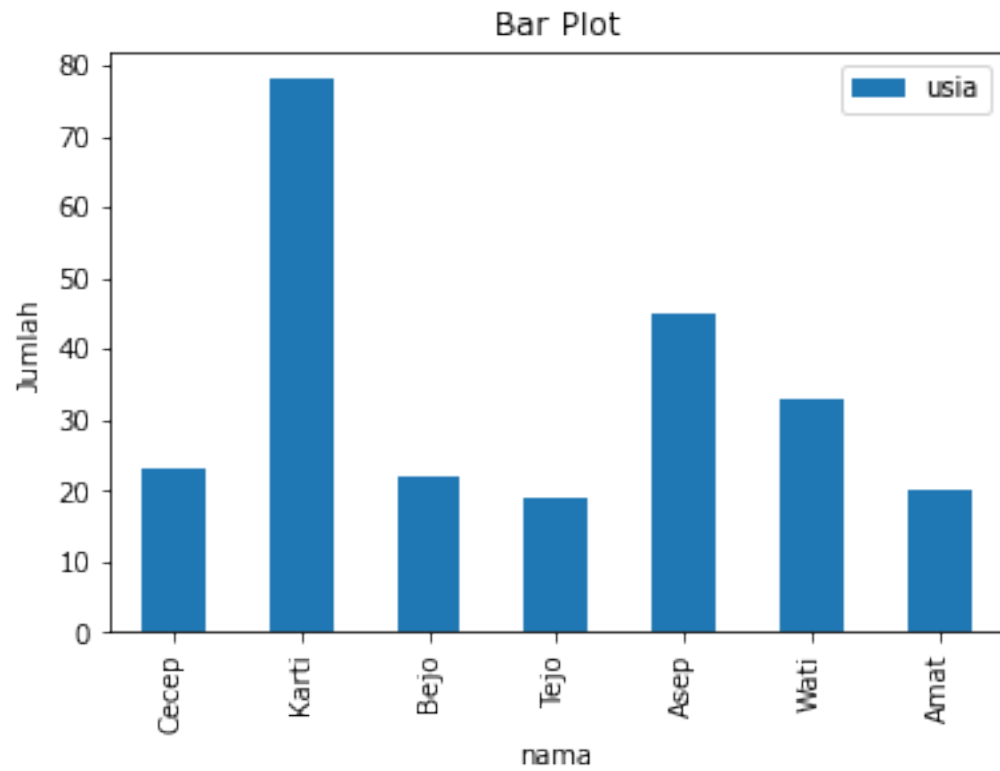


## 1.7 7. Bar Plot

```
[9]: df.plot(kind='bar', x='nama', y='usia')

plt.title('Bar Plot')
plt.ylabel('Jumlah')

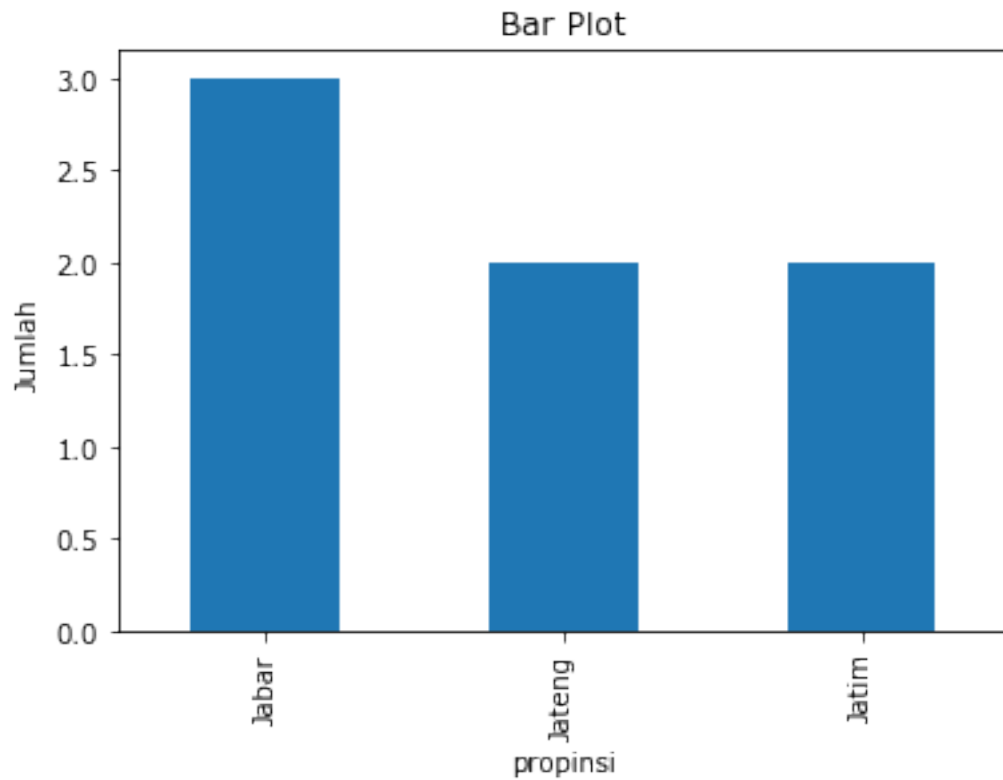
plt.show()
```



```
[10]: df.groupby('propinsi')['nama'].count().plot(kind='bar')

plt.title('Bar Plot')
plt.ylabel('Jumlah')

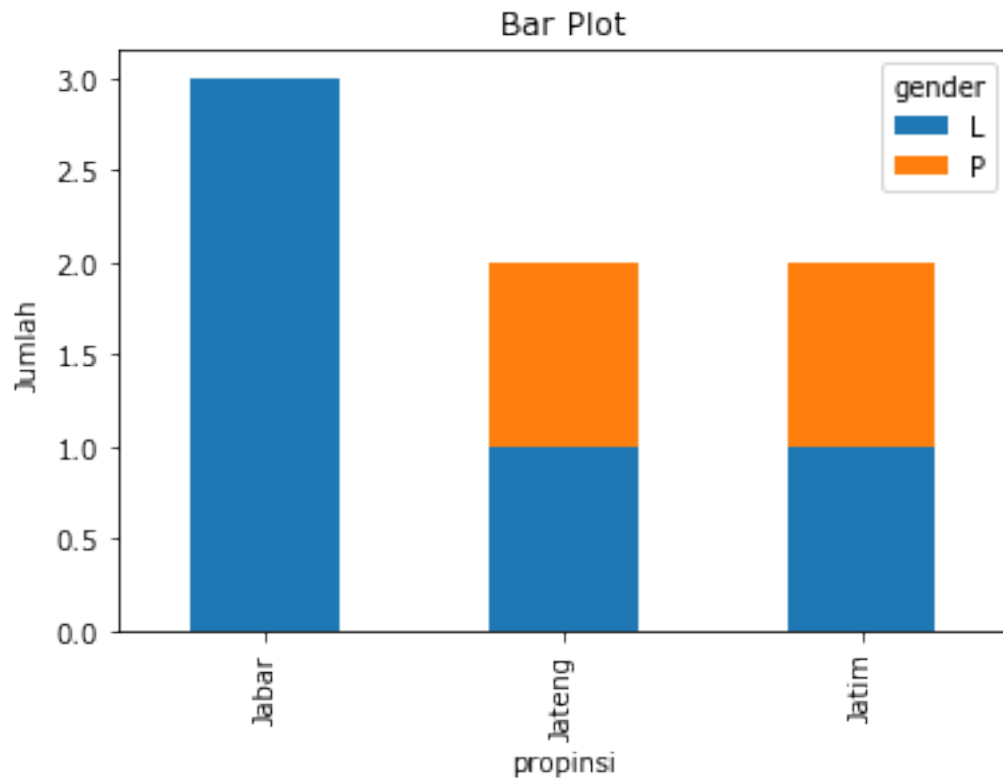
plt.show()
```



## 1.8 8. Stacked Bar Plot dengan Dua level Group By

```
[11]: df.groupby(['propinsi', 'gender']).size().unstack().plot(kind='bar',  
                                                                stacked='True')  
  
plt.title('Bar Plot')  
plt.ylabel('Jumlah')  
  
plt.show()
```





```
[12]: df.groupby(['gender', 'propinsi']).size().unstack().plot(kind='bar',  
                                                                stacked='True')  
  
plt.title('Bar Plot')  
plt.ylabel('Jumlah')  
  
plt.show()
```

