

Nama : Iqlima Syahwa

Nim : A11.2020.12799

```
[1] import numpy as np
import matplotlib.pyplot as plt
import pandas as pd

[2] dataset = pd.read_csv("Social_Network_Ads.csv")
x = dataset.iloc[:, [2,3]].values
y = dataset.iloc[:, -1].values

print(x)
```

[	48	29000]
[	45	22000]
[	47	49000]
[	48	41000]
[	45	22000]
[	46	23000]
[	47	20000]
[	49	28000]
[	47	30000]
[	29	43000]
[	31	18000]
[	31	74000]
[	27	137000]
[	21	16000]

```
[1] import numpy as np
import matplotlib.pyplot as plt
import pandas as pd

[2] dataset = pd.read_csv("Social_Network_Ads.csv")
x = dataset.iloc[:, [2,3]].values
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[	48	29000]
[	45	22000]
[	47	49000]
[	48	41000]
[	45	22000]
[	46	23000]
[	47	20000]
[	49	28000]
[	47	30000]
[	29	43000]
[	31	18000]
[	31	74000]
[	27	137000]
[	21	16000]

Klasifikasi Data dengan Naive Bayes.ipynb Course: [20222] DATA MINING

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Klasifikasi Data dengan Naive Bayes.ipynb

File Edit Lihat Sisipkan Runtime Fitur Bantuan Semua perubahan disimpan

File

- ..
- sample\_data
- Social\_Network\_Ads.csv

+ Kode + Teks

```
[ 49 39000]
[ 39 71000]
[ 47 34000]
[ 48 35000]
[ 48 33000]
[ 47 23000]
[ 45 45000]
[ 60 42000]
[ 39 59000]
[ 46 41000]
[ 51 23000]
[ 50 20000]
[ 36 33000]
[ 49 36000]
```

0 d selesai pada 01.50

Klasifikasi Data dengan Naive Bayes.ipynb Course: [20222] DATA MINING

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Klasifikasi Data dengan Naive Bayes.ipynb

File Edit Lihat Sisipkan Runtime Fitur Bantuan

File

- ..
- sample\_data
- Social\_Network\_Ads.csv

+ Kode + Teks

```
[ 60 42000]
[ 39 59000]
[ 46 41000]
[ 51 23000]
[ 50 20000]
[ 36 33000]
[ 49 36000]
```

print(y)

```
[0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 0 0 0 1 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0
0 1 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 1 0
0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
1 1 0 0 1 1 0 1 1 0 1 1 0 1 0 0 0 1 1 0 1 1 0 1 0 1 0 1 0 1 1 0 1 0 0 1
1 0 1 1 0 1 1 0 0 1 0 0 1 1 1 1 0 1 1 1 0 1 1 0 1 0 1 0 1 1 1 0 0 0 1
1 1 0 1 1 1 1 1 0 0 0 1 1 0 0 1 0 1 0 1 1 0 1 0 1 1 0 1 1 0 0 0 1 1 0 1 0
0 1 0 1 0 0 1 1 0 0 1 1 0 0 1 1 0 0 1 0 1 0 1 1 1 0 1 0 1 1 1 0 1 1 0 1
1 1 0 1 0 1 0 0 1 1 0 1 1 1 1 1 0 1 1 1 1 1 0 1 1 1 0 1 1 1 0 1]
```

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Klasifikasi Data dengan Naive Bayes

Course: [20222] DATA MINING

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Klasifikasi Data dengan Naive Bayes.ipynb

Komentar

Bagikan

File Edit Lihat Sisipkan Runtime Fitur Bantuan Semua perubahan disimpan

File

..sample\_dataSocial\_Network\_Ads.csv

+ Kode + Teks

[4] print(y)

[0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 0 0 0 1 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0  
0 1 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 0  
0 1 0 0 0 0 0 0 0 0 1 0  
0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0  
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1 0 1 0 1 1 0 0 0 1 0 0 0 1 0 1  
1 1 0 0 1 1 0 1 1 0 1 1 0 1 0 0 0 1 1 0 1 1 0 1 0 1 0 1 0 1 1 0 1 0 0 1  
1 0 1 1 0 1 1 0 0 1 0 0 1 1 1 1 1 0 1 1 1 1 0 1 0 1 0 1 1 1 1 0 0 0  
1 1 0 1 1 1 1 1 0 0 0 1 1 0 0 1 0 1 0 1 1 0 1 0 1 1 1 0 0 0 1 1 0 1 0  
0 1 0 1 0 0 1 1 0 0 1 1 0 1 1 0 0 1 0 1 0 1 1 1 0 1 1 1 0 1 1 1 1 0 1  
1 1 0 1 0 1 0 0 1 1 0 1 1 1 1 1 1 0 1 1 1 1 1 0 1 1 1 1 0 1]

from sklearn.model\_selection import train\_test\_split  
x\_train, x\_test, y\_train, y\_test = train\_test\_split(x, y, test\_size=0.25, random\_state=0)

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Search

2:00 AM 4/1/2023

Klasifikasi Data dengan Naive Bayes Course: [20222] DATA MINING

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### Klasifikasi Data dengan Naive Bayes.ipynb

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Komentar Bagikan

File

- ..
- sample\_data
- Social\_Network\_Ads.csv

+ Kode + Teks

```
[4] print(y)
```

```
[0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 0 0 0 1 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0
0 1 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 1 0
0 0 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
1 1 0 0 1 1 0 1 1 0 1 1 0 0 0 1 1 0 1 1 0 1 0 1 0 1 0 0 1 1 0 1 0 0 1
1 0 1 1 0 1 1 0 0 1 0 0 1 1 1 1 0 1 1 1 0 1 1 0 1 0 1 1 1 1 0 0 0
1 1 0 1 1 1 1 1 0 0 0 1 1 0 0 1 0 1 0 1 1 0 1 1 0 1 1 0 0 0 1 1 0 1 0
0 1 0 1 0 0 1 1 0 0 1 1 0 1 1 0 0 1 0 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1
1 1 0 1 0 1 0 0 1 1 0 1 1 1 1 1 0 1 1 1 1 1 0 1 1 1 1 0 1 1 1 0 1]
```

```
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.25, random_state=0)
```

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Klasifikasi Data dengan Naive Bayes Course: [20222] DATA MINING

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### Klasifikasi Data dengan Naive Bayes.ipynb

File Edit Lihat Sisipkan Runtime Fitur Bantuan

Komentar Bagikan

File

- ..
- sample\_data
- Social\_Network\_Ads.csv

+ Kode + Teks

```
[5] from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.25, random_state=0)
```

```
print(x_train)
```

```
[ 39 106000]
[ 37 57000]
[ 26 72000]
[ 35 23000]
[ 54 108000]
[ 30 17000]
[ 39 134000]
[ 29 43000]
[ 33 43000]
[ 35 38000]
[ 41 45000]
[ 41 72000]
[ 39 134000]
[ 27 137000]
[ 21 16000]
[ 26 32000]
[ 31 66000]
[ 39 73000]
[ 41 79000]
[ 47 50000]
[ 41 30000]
```

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Klasifikasi Data dengan Naive Bayes x Course: [20222] DATA MINING x

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### Klasifikasi Data dengan Naive Bayes.ipynb

File Edit Lihat Sisipkan Runtime Fitur Bantuan Semua perubahan disimpan

Komentar Bagikan

File

sample\_data

Social\_Network\_Ads.csv

+ Kode + Teks

```
[ 27 31000]
[ 19 70000]
[ 39 79000]
[ 26 81000]
[ 25 80000]
[ 28 85000]
[ 55 39000]
[ 50 88000]
[ 49 88000]
[ 52 150000]
[ 35 65000]
[ 42 54000]
[ 34 43000]
[ 37 52000]
[ 48 30000]
[ 29 43000]
[ 36 52000]
[ 27 54000]
[ 26 118000]]
```

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Klasifikasi Data dengan Naive Bayes

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Klasifikasi Data dengan Naive Bayes.ipynb

File Edit Lihat Sisipkan Runtime Fitur Bantuan Semua perubahan disimpan

Komentar Bagikan

File

sample\_data

Social\_Network\_Ads.csv

+ Kode + Teks

```
[5] [ 34 43000]
[ 37 52000]
[ 48 30000]
[ 29 43000]
[ 36 52000]
[ 27 54000]
[ 26 118000]
```

```
print(y_train)
```

```
[0 1 0 1 1 1 1 0 0 0 0 0 0 1 1 1 0 1 0 0 0 1 0 1 0 1 0 0 1 1 1 1 0 1 0 1 0 0 0 1
0 0 1 0 0 0 0 0 0 1 1 1 1 0 0 0 1 0 1 0 1 0 0 0 1 0 0 0 1 0 0 0 1 1 0 0 1 0 1
1 1 0 0 1 1 0 0 1 1 0 1 0 0 1 1 0 1 1 1 0 0 0 0 0 1 0 0 1 1 1 1 1 0 1 1 0
1 0 0 0 0 0 0 0 1 1 0 0 1 0 0 1 0 0 0 1 0 1 1 0 1 0 0 0 0 1 0 0 0 1 1 0 0
0 0 1 0 1 0 0 0 1 0 0 0 0 1 1 1 0 0 0 0 0 0 1 1 1 1 0 1 0 0 0 0 0 1 0 0
0 0 0 0 1 1 0 1 0 1 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 0 1 1 0 0 0 0 0
0 1 1 0 0 0 0 1 0 0 0 0 1 0 1 0 1 0 0 0 1 0 0 0 0 1 0 0 0 0 0 1 1 0 0 0
0 0 1 0 1 1 0 0 0 0 0 1 0 1 0 0 1 0 0 1 0 1 0 0 0 0 0 1 1 1 0 0 0 0 1
0 0 0 0]
```

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Klasifikasi Data dengan Naive Bayes

Course: [20222] DATA MINING

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Klasifikasi Data dengan Naive Bayes.ipynb

File Edit Lihat Sisipkan Runtime Fitur Bantuan Semua perubahan disimpan

Komentar Bagikan

File

sample\_data

Social\_Network\_Ads.csv

+ Kode + Teks

```
[7] print(y_train)
```

```
[0 1 0 1 1 1 1 0 0 0 0 0 0 1 1 1 0 1 0 0 1 0 1 0 1 0 0 1 1 1 1 0 1 0 1 0 0 1
0 0 1 0 0 0 0 0 1 1 1 1 0 0 0 1 0 1 0 1 0 0 0 1 0 0 0 1 0 0 0 1 1 0 0 1 0 1
1 1 0 0 1 1 0 0 1 1 0 1 0 0 1 1 0 1 1 1 0 0 0 0 0 1 0 0 1 1 1 1 1 0 1 1 0
1 0 0 0 0 0 0 0 1 1 0 0 1 0 0 1 0 0 0 1 0 1 1 0 1 0 0 0 0 1 0 0 0 1 1 0 0
0 0 1 0 1 0 0 0 1 0 0 0 0 1 1 1 0 0 0 0 0 0 1 1 1 1 0 1 0 0 0 0 0 1 0 0
0 0 0 0 1 1 0 1 0 1 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 0 1 1 0 0 0 0 0
0 1 1 0 0 0 0 1 0 0 0 0 1 0 1 0 1 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 1 0 0 0
0 0 1 0 1 1 0 0 0 0 0 1 0 1 0 0 1 0 0 1 0 1 0 0 0 0 0 1 1 1 0 0 0 0 1
0 0 0 0]
```

```
print(y_test)
```

```
[0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 1 0 0 1 0 1 0 0 0 0 0 0 1 1 0 0 0 0
0 0 1 0 0 0 0 1 0 0 1 0 1 1 0 0 0 1 1 0 0 1 0 0 1 0 1 0 1 0 0 0 0 1 0 0 1
0 0 0 0 1 1 1 0 0 0 1 1 0 1 1 0 0 1 0 0 0 1 0 1 1 1]
```

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Klasifikasi Data dengan Naive Bayes Course: [20222] DATA MINING

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### Klasifikasi Data dengan Naive Bayes.ipynb

File Edit Lihat Sisipkan Runtime Fitur Bantuan Semua perubahan disimpan

Komentar Bagikan

File

- ..
- sample\_data
- Social\_Network\_Ads.csv

+ Kode + Teks

```
[8] print(y_test)
```

```
[0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 1 0 0 1 0 1 0 1 0 0 0 0 0 1 1 0 0 0 0
0 0 1 0 0 0 0 1 0 0 1 0 1 1 0 0 0 1 1 0 0 1 0 0 1 0 1 0 1 0 0 0 0 1 0 0 1
0 0 0 0 1 1 1 0 0 0 1 1 0 1 1 0 0 1 0 0 0 1 0 1 0 1 0 0 0 0 1 0 0 1]
```

```
from sklearn.preprocessing import StandardScaler
sc = StandardScaler()
x_train = sc.fit_transform(x_train)
x_test = sc.transform(x_train)
```

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Klasifikasi Data dengan Naive Bayes Course: [20222] DATA MINING

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### Klasifikasi Data dengan Naive Bayes.ipynb

File Edit Lihat Sisipkan Runtime Fitur Bantuan Menyimpan...

Komentar Bagikan

File

- ..
- sample\_data
- Social\_Network\_Ads.csv

+ Kode + Teks

```
[11] [-3.75739722 -2.01743842]
      [-3.64951596 -2.01737537]
      [-3.6985529 -2.01743169]
      [-3.80643416 -2.01743506]
      [-3.777012 -2.01745523]
      [-3.79662677 -2.01743506]
      [-3.78681938 -2.01743253]
      [-3.777012 -2.01744682]
      [-3.56124948 -2.01740732]
      [-3.95354497 -2.01742917]
      [-3.59067164 -2.0174359 ]
      [-3.73778245 -2.01744346]
```

```
from sklearn.naive_bayes import GaussianNB
classifier = GaussianNB()
classifier.fit(x_train, y_train)

GaussianNB(priors=None, var_smoothing=1e-09)
```

GaussianNB  
GaussianNB()

[ ]

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79°F Mostly cloudy



Klasifikasi Data dengan Naive Bayes x Course: [20222] DATA MINING x +

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Klasifikasi Data dengan Naive Bayes.ipynb

File Edit Lihat Sisipkan Runtime Fitur Bantuan

Komentar Bagikan

File

sample\_data

Social\_Network\_Ads.csv

+ Kode + Teks

```
[ -3.55067104 -2.0174555 ]
[ -3.73778245 -2.01744346 ]
```

```
[12] from sklearn.naive_bayes import GaussianNB
classifier = GaussianNB()
classifier.fit(x_train, y_train)

GaussianNB(priors=None, var_smoothing=1e-09)
```

```
y_pred = classifier.predict(x_test)
```

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79°F Mostly cloudy

Selamat Datang di Colaboratory x Untitled2.ipynb - Colaboratory x Klasifikasi Data dengan Naive Bayes x +

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Klasifikasi Data dengan Naive Bayes.ipynb

File Edit Lihat Sisipkan Runtime Fitur Bantuan

Komentar Bagikan

File

sample\_data

Social\_Network\_Ads.csv

+ Kode + Teks

```
[ 0.97777845 0.59194336 ]
[ 0.38358493 0.99784738 ]
```

```
[13] from sklearn.naive_bayes import GaussianNB
classifier = GaussianNB()
classifier.fit(x_train, y_train)

GaussianNB
```

```
y_pred = classifier.predict(x_test)
```

```
from sklearn.metrics import confusion_matrix
cm = confusion_matrix(y_test, y_pred)
print(cm)
```

```
[[65  3]
 [ 7 25]]
```

0 d selesai pada 02:48

79°F Mostly cloudy



Selamat Datang di Colaboratory | Untitled2.ipynb - Colaboratory | Klasifikasi Data dengan Naive Bayes | https://kulino.dinus.ac.id/plugin/ | +

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### Klasifikasi Data dengan Naive Bayes.ipynb

File Edit Lihat Sisipkan Runtime Fitur Bantuan Menyimpan...

File


- ..
- sample\_data
- Social\_Network\_Ads.csv

+ Kode + Teks

```
from matplotlib.colors import ListedColormap
x_set, y_set = x_train, y_train
x1, x2 = np.meshgrid(np.arange(start = x_set[:, 0].min()-1, stop = x_set[:, 0].max() + 1, step=0.01),
                     np.arange(start = x_set[:, 1].min()-1, stop = x_set[:, 1].max() + 1, step=0.01))
plt.contourf(x1,x2, classifier.predict(np.array([x1.ravel(), x2.ravel()]).T).reshape(x1.shape),
             alpha = 0.75, cmap = ListedColormap(('red', 'green')))
plt.xlim(x1.min(), x1.max())
plt.ylim(x2.min(), x2.max())
for i, j in enumerate(np.unique(y_set)):
    plt.scatter(x_set[y_set == j, 0], x_set[y_set==j, 1],
                c = ListedColormap(('red', 'green'))(i), label = j)
plt.title('Klasifikasi Data dengan Naive Bayes (Data Training)')
plt.xlabel('Umur')
plt.ylabel('Estimasi Gaji')
plt.legend()
plt.show()
```

<ipython-input-17-58c9f465d187>:10: UserWarning: \*c\* argument looks like a single numeric RGB or RGBA sequence,  
plt.scatter(x\_set[y\_set == j, 0], x\_set[y\_set==j, 1],

Klasifikasi Data dengan Naive Bayes (Data Training)



1 d selesai pada 03.38

79°F Rain showers

3:38 AM 4/1/2023

