Nama	: Adelia Putri Widyasari	Dosen	: Junta Zeniarja, M.Kom
NIM	: A11.2022.14426	Matkul	: Penambangan Data
Kelompok	: A11.43UG1	Prodi	: S1 Teknik Informatika

PERTEMUAN 7 KLASIFIKASI NAÏVE BAYES

```
# -*- coding: utf-8 -*-
"""naive_bayes.ipynb

Automatically generated by Colaboratory.

Original file is located at
    https://colab.research.google.com/drive/1iNzwxQhOzZZhVhi3lMRq2uP6MtihD_cM
"""

import numpy as np
import matplotlib.pyplot as plt
import pandas as pd

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

print(x)

print(y)

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)

print(x_test)

print(y_train)

print(y_test)

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

print(x_train)

print(x_test)

from sklearn.naive_bayes import GaussianNB
```

```
classifier = GaussianNB()
classifier.fit(x_train, y_train)

y_pred = classifier.predict(x_test)

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

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[:,
0].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 Naiive Bayes (Data Training)')
plt.xlabel('Umur')
plt.ylabel('Estimasi Gaji')
plt.legend()
plt.show()

from matplotlib.colors import ListedColormap
x_set, y_set = x_test, y_test
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[:,
0].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 Naiive Bayes (Data Testing)')
plt.xlabel('Umur')
plt.ylabel('Estimasi Gaji')
plt.legend()
plt.show()
```

Link github : https://github.com/adeliaputriw/ClassificationNaiveBayes-43UG1-A11.2022.14426.git