کدنویسی

**live code**

!pip install numpy

!pip install pandas

!pip install seaborn

!pip install matplotlib

!pip install scikit-learn

Requirement already satisfied: numpy in c:\users\bagher\anaconda3\lib\site-packages (1.19.5)

Requirement already satisfied: pandas in c:\users\bagher\anaconda3\lib\site-packages (1.3.4)

Requirement already satisfied: python-dateutil>=2.7.3 in c:\users\bagher\anaconda3\lib\site-packages (from pandas) (2.8.2)

Requirement already satisfied: pytz>=2017.3 in c:\users\bagher\anaconda3\lib\site-packages (from pandas) (2021.3)

Requirement already satisfied: numpy>=1.17.3 in c:\users\bagher\anaconda3\lib\site-packages (from pandas) (1.19.5)

Requirement already satisfied: six>=1.5 in c:\users\bagher\anaconda3\lib\site-packages (from python-dateutil>=2.7.3->pandas) (1.16.0)

Requirement already satisfied: seaborn in c:\users\bagher\anaconda3\lib\site-packages (0.11.2)

Requirement already satisfied: matplotlib>=2.2 in c:\users\bagher\anaconda3\lib\site-packages (from seaborn) (3.4.3)

Requirement already satisfied: numpy>=1.15 in c:\users\bagher\anaconda3\lib\site-packages (from seaborn) (1.19.5)

Requirement already satisfied: pandas>=0.23 in c:\users\bagher\anaconda3\lib\site-packages (from seaborn) (1.3.4)

Requirement already satisfied: scipy>=1.0 in c:\users\bagher\anaconda3\lib\site-packages (from seaborn) (1.7.1)

Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\bagher\anaconda3\lib\site-packages (from matplotlib>=2.2->seaborn) (1.3.1)

Requirement already satisfied: cycler>=0.10 in c:\users\bagher\anaconda3\lib\site-packages (from matplotlib>=2.2->seaborn) (0.10.0)

Requirement already satisfied: python-dateutil>=2.7 in c:\users\bagher\anaconda3\lib\site-packages (from matplotlib>=2.2->seaborn) (2.8.2)

Requirement already satisfied: pyparsing>=2.2.1 in c:\users\bagher\anaconda3\lib\site-packages (from matplotlib>=2.2->seaborn) (3.0.4)

Requirement already satisfied: pillow>=6.2.0 in c:\users\bagher\anaconda3\lib\site-packages (from matplotlib>=2.2->seaborn) (8.4.0)

Requirement already satisfied: six in c:\users\bagher\anaconda3\lib\site-packages (from cycler>=0.10->matplotlib>=2.2->seaborn) (1.16.0)

Requirement already satisfied: pytz>=2017.3 in c:\users\bagher\anaconda3\lib\site-packages (from pandas>=0.23->seaborn) (2021.3)

Requirement already satisfied: matplotlib in c:\users\bagher\anaconda3\lib\site-packages (3.4.3)

Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\bagher\anaconda3\lib\site-packages (from matplotlib) (1.3.1)

Requirement already satisfied: cycler>=0.10 in c:\users\bagher\anaconda3\lib\site-packages (from matplotlib) (0.10.0)

Requirement already satisfied: numpy>=1.16 in c:\users\bagher\anaconda3\lib\site-packages (from matplotlib) (1.19.5)

Requirement already satisfied: pyparsing>=2.2.1 in c:\users\bagher\anaconda3\lib\site-packages (from matplotlib) (3.0.4)

Requirement already satisfied: python-dateutil>=2.7 in c:\users\bagher\anaconda3\lib\site-packages (from matplotlib) (2.8.2)

Requirement already satisfied: pillow>=6.2.0 in c:\users\bagher\anaconda3\lib\site-packages (from matplotlib) (8.4.0)

Requirement already satisfied: six in c:\users\bagher\anaconda3\lib\site-packages (from cycler>=0.10->matplotlib) (1.16.0)

Requirement already satisfied: scikit-learn in c:\users\bagher\anaconda3\lib\site-packages (0.24.2)

Requirement already satisfied: threadpoolctl>=2.0.0 in c:\users\bagher\anaconda3\lib\site-packages (from scikit-learn) (2.2.0)

Requirement already satisfied: numpy>=1.13.3 in c:\users\bagher\anaconda3\lib\site-packages (from scikit-learn) (1.19.5)

Requirement already satisfied: scipy>=0.19.1 in c:\users\bagher\anaconda3\lib\site-packages (from scikit-learn) (1.7.1)

Requirement already satisfied: joblib>=0.11 in c:\users\bagher\anaconda3\lib\site-packages (from scikit-learn) (1.1.0)

!pip install Pyppeteer

Collecting Pyppeteer

Downloading pyppeteer-1.0.2-py3-none-any.whl (83 kB)

Requirement already satisfied: importlib-metadata>=1.4 in c:\users\bagher\anaconda3\lib\site-packages (from Pyppeteer) (4.8.1)

Requirement already satisfied: urllib3<2.0.0,>=1.25.8 in c:\users\bagher\anaconda3\lib\site-packages (from Pyppeteer) (1.26.7)

Requirement already satisfied: appdirs<2.0.0,>=1.4.3 in c:\users\bagher\anaconda3\lib\site-packages (from Pyppeteer) (1.4.4)

Requirement already satisfied: certifi>=2021 in c:\users\bagher\anaconda3\lib\site-packages (from Pyppeteer) (2021.10.8)

Collecting websockets<11.0,>=10.0

Downloading websockets-10.1-cp39-cp39-win\_amd64.whl (97 kB)

Collecting pyee<9.0.0,>=8.1.0

Downloading pyee-8.2.2-py2.py3-none-any.whl (12 kB)

Requirement already satisfied: tqdm<5.0.0,>=4.42.1 in c:\users\bagher\anaconda3\lib\site-packages (from Pyppeteer) (4.62.3)

Requirement already satisfied: zipp>=0.5 in c:\users\bagher\anaconda3\lib\site-packages (from importlib-metadata>=1.4->Pyppeteer) (3.6.0)

Requirement already satisfied: colorama in c:\users\bagher\anaconda3\lib\site-packages (from tqdm<5.0.0,>=4.42.1->Pyppeteer) (0.4.4)

Installing collected packages: websockets, pyee, Pyppeteer

Successfully installed Pyppeteer-1.0.2 pyee-8.2.2 websockets-10.1

!pip install tensorflow

Collecting tensorflow

Using cached tensorflow-2.7.0-cp39-cp39-win\_amd64.whl (430.8 MB)

Requirement already satisfied: wrapt>=1.11.0 in c:\users\bagher\anaconda3\lib\site-packages (from tensorflow) (1.12.1)

Requirement already satisfied: typing-extensions>=3.6.6 in c:\users\bagher\anaconda3\lib\site-packages (from tensorflow) (3.10.0.2)

Collecting keras-preprocessing>=1.1.1

Using cached Keras\_Preprocessing-1.1.2-py2.py3-none-any.whl (42 kB)

Collecting libclang>=9.0.1

Downloading libclang-13.0.0-py2.py3-none-win\_amd64.whl (13.9 MB)

Requirement already satisfied: wheel<1.0,>=0.32.0 in c:\users\bagher\anaconda3\lib\site-packages (from tensorflow) (0.37.0)

Requirement already satisfied: protobuf>=3.9.2 in c:\users\bagher\anaconda3\lib\site-packages (from tensorflow) (3.19.1)

Requirement already satisfied: six>=1.12.0 in c:\users\bagher\anaconda3\lib\site-packages (from tensorflow) (1.16.0)

Collecting opt-einsum>=2.3.2

Using cached opt\_einsum-3.3.0-py3-none-any.whl (65 kB)

Collecting grpcio<2.0,>=1.24.3

Downloading grpcio-1.43.0-cp39-cp39-win\_amd64.whl (3.4 MB)

Requirement already satisfied: h5py>=2.9.0 in c:\users\bagher\anaconda3\lib\site-packages (from tensorflow) (3.2.1)

Collecting flatbuffers<3.0,>=1.12

Using cached flatbuffers-2.0-py2.py3-none-any.whl (26 kB)

Collecting termcolor>=1.1.0

Using cached termcolor-1.1.0-py3-none-any.whl

Collecting gast<0.5.0,>=0.2.1

Using cached gast-0.4.0-py3-none-any.whl (9.8 kB)

Collecting tensorboard~=2.6

Downloading tensorboard-2.8.0-py3-none-any.whl (5.8 MB)

Collecting tensorflow-estimator<2.8,~=2.7.0rc0

Using cached tensorflow\_estimator-2.7.0-py2.py3-none-any.whl (463 kB)

Requirement already satisfied: keras<2.8,>=2.7.0rc0 in c:\users\bagher\anaconda3\lib\site-packages (from tensorflow) (2.7.0)

Collecting absl-py>=0.4.0

Using cached absl\_py-1.0.0-py3-none-any.whl (126 kB)

Requirement already satisfied: numpy>=1.14.5 in c:\users\bagher\anaconda3\lib\site-packages (from tensorflow) (1.19.5)

Collecting google-pasta>=0.1.1

Using cached google\_pasta-0.2.0-py3-none-any.whl (57 kB)

Collecting tensorflow-io-gcs-filesystem>=0.21.0

Using cached tensorflow\_io\_gcs\_filesystem-0.23.1-cp39-cp39-win\_amd64.whl (1.5 MB)

Collecting astunparse>=1.6.0

Using cached astunparse-1.6.3-py2.py3-none-any.whl (12 kB)

Requirement already satisfied: requests<3,>=2.21.0 in c:\users\bagher\anaconda3\lib\site-packages (from tensorboard~=2.6->tensorflow) (2.26.0)

Collecting google-auth-oauthlib<0.5,>=0.4.1

Using cached google\_auth\_oauthlib-0.4.6-py2.py3-none-any.whl (18 kB)

Requirement already satisfied: werkzeug>=0.11.15 in c:\users\bagher\anaconda3\lib\site-packages (from tensorboard~=2.6->tensorflow) (2.0.2)

Requirement already satisfied: google-auth<3,>=1.6.3 in c:\users\bagher\anaconda3\lib\site-packages (from tensorboard~=2.6->tensorflow) (2.3.3)

Requirement already satisfied: tensorboard-data-server<0.7.0,>=0.6.0 in c:\users\bagher\anaconda3\lib\site-packages (from tensorboard~=2.6->tensorflow) (0.6.1)

Requirement already satisfied: setuptools>=41.0.0 in c:\users\bagher\anaconda3\lib\site-packages (from tensorboard~=2.6->tensorflow) (58.0.4)

Requirement already satisfied: tensorboard-plugin-wit>=1.6.0 in c:\users\bagher\anaconda3\lib\site-packages (from tensorboard~=2.6->tensorflow) (1.8.0)

Collecting markdown>=2.6.8

Using cached Markdown-3.3.6-py3-none-any.whl (97 kB)

Requirement already satisfied: cachetools<5.0,>=2.0.0 in c:\users\bagher\anaconda3\lib\site-packages (from google-auth<3,>=1.6.3->tensorboard~=2.6->tensorflow) (4.2.4)

Requirement already satisfied: rsa<5,>=3.1.4 in c:\users\bagher\anaconda3\lib\site-packages (from google-auth<3,>=1.6.3->tensorboard~=2.6->tensorflow) (4.8)

Requirement already satisfied: pyasn1-modules>=0.2.1 in c:\users\bagher\anaconda3\lib\site-packages (from google-auth<3,>=1.6.3->tensorboard~=2.6->tensorflow) (0.2.8)

Requirement already satisfied: requests-oauthlib>=0.7.0 in c:\users\bagher\anaconda3\lib\site-packages (from google-auth-oauthlib<0.5,>=0.4.1->tensorboard~=2.6->tensorflow) (1.3.0)

Requirement already satisfied: importlib-metadata>=4.4 in c:\users\bagher\anaconda3\lib\site-packages (from markdown>=2.6.8->tensorboard~=2.6->tensorflow) (4.8.1)

Requirement already satisfied: zipp>=0.5 in c:\users\bagher\anaconda3\lib\site-packages (from importlib-metadata>=4.4->markdown>=2.6.8->tensorboard~=2.6->tensorflow) (3.6.0)

Requirement already satisfied: pyasn1<0.5.0,>=0.4.6 in c:\users\bagher\anaconda3\lib\site-packages (from pyasn1-modules>=0.2.1->google-auth<3,>=1.6.3->tensorboard~=2.6->tensorflow) (0.4.8)

Requirement already satisfied: charset-normalizer~=2.0.0 in c:\users\bagher\anaconda3\lib\site-packages (from requests<3,>=2.21.0->tensorboard~=2.6->tensorflow) (2.0.4)

Requirement already satisfied: certifi>=2017.4.17 in c:\users\bagher\anaconda3\lib\site-packages (from requests<3,>=2.21.0->tensorboard~=2.6->tensorflow) (2021.10.8)

Requirement already satisfied: idna<4,>=2.5 in c:\users\bagher\anaconda3\lib\site-packages (from requests<3,>=2.21.0->tensorboard~=2.6->tensorflow) (3.2)

Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\bagher\anaconda3\lib\site-packages (from requests<3,>=2.21.0->tensorboard~=2.6->tensorflow) (1.26.7)

Requirement already satisfied: oauthlib>=3.0.0 in c:\users\bagher\anaconda3\lib\site-packages (from requests-oauthlib>=0.7.0->google-auth-oauthlib<0.5,>=0.4.1->tensorboard~=2.6->tensorflow) (3.1.1)

Installing collected packages: markdown, grpcio, google-auth-oauthlib, absl-py, termcolor, tensorflow-io-gcs-filesystem, tensorflow-estimator, tensorboard, opt-einsum, libclang, keras-preprocessing, google-pasta, gast, flatbuffers, astunparse, tensorflow

Successfully installed absl-py-1.0.0 astunparse-1.6.3 flatbuffers-2.0 gast-0.4.0 google-auth-oauthlib-0.4.6 google-pasta-0.2.0 grpcio-1.43.0 keras-preprocessing-1.1.2 libclang-13.0.0 markdown-3.3.6 opt-einsum-3.3.0 tensorboard-2.8.0 tensorflow-2.7.0 tensorflow-estimator-2.7.0 tensorflow-io-gcs-filesystem-0.23.1 termcolor-1.1.0

import numpy as np

import pandas as pd

import matplotlib.pyplot as plt

import seaborn as sns

from sklearn.svm import SVC

from sklearn.tree import DecisionTreeClassifier

from sklearn.ensemble import RandomForestClassifier

from sklearn.linear\_model import LogisticRegression

df = pd.read\_csv("data.csv