**Support Vector Machine (Using colab)**

**Python Code**

# Import necessary libraries

import matplotlib.pyplot as plt

from sklearn import datasets

from sklearn import svm

from sklearn.model\_selection import train\_test\_split

from sklearn.svm import SVC

from sklearn.metrics import accuracy\_score

# Load the iris dataset as an example

iris = datasets.load\_digits()

X = iris.data

y = iris.target

print(X)

print("========================")

print(y)

# Split the data into training and testing sets

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.2, random\_state=42)

# Create an SVM classifier

cls = svm.SVC(kernel="linear")

X\_train,y\_train =iris.data[:-10],iris.target[:-10]

# Train the classifier on the training data

cls.fit(X\_train, y\_train)

# Make predictions on the testing data

y\_pred = cls.predict(X\_test)

print(cls.predict(iris.data[:-10]))

# Evaluate the accuracy of the classifier

accuracy = accuracy\_score(y\_test, y\_pred)

print(f"Accuracy: {accuracy}")

plt.imshow(iris.images[9], interpolation='nearest')

plt.show()

**Output**

[[ 0. 0. 5. ... 0. 0. 0.]

[ 0. 0. 0. ... 10. 0. 0.]

[ 0. 0. 0. ... 16. 9. 0.]

...

[ 0. 0. 1. ... 6. 0. 0.]

[ 0. 0. 2. ... 12. 0. 0.]

[ 0. 0. 10. ... 12. 1. 0.]]

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[0 1 2 ... 8 9 8]

[0 1 2 ... 5 7 9]

Accuracy: 1.0

