svm-using-iris-dataset

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```python
import pandas as pd
from sklearn.svm import SVC
from sklearn.model_selection import train_test_split
from sklearn.metrics import accuracy_score,confusion_matrix
df=pd.read_csv("/content/iris_data.csv")
df
```

```
     sepal_length  sepal_width  petal_length  petal_width    species
0             5.1          3.5           1.4          0.2     setosa
1             4.9          3.0           1.4          0.2     setosa
2             4.7          3.2           1.3          0.2     setosa
3             4.6          3.1           1.5          0.2     setosa
4             5.0          3.6           1.4          0.2     setosa
..            ...          ...           ...          ...        ...
145           6.7          3.0           5.2          2.3  virginica
146           6.3          2.5           5.0          1.9  virginica
147           6.5          3.0           5.2          2.0  virginica
148           6.2          3.4           5.4          2.3  virginica
149           5.9          3.0           5.1          1.8  virginica

[150 rows x 5 columns]
```

```python
X=df[['sepal_length','sepal_width','petal_length','petal_width']]
Y=df['species']
```

```python
X_train, X_test, Y_train, Y_test = train_test_split(X, Y, test_size=0.2,
 random_state=42)
```

```python
svm_model=SVC(kernel='linear')
svm_model.fit(X_train,Y_train)
```

```python
SVC(kernel='linear')
```

```python
Y_pred=svm_model.predict(X_test)
```

```python
print("Accuracy:",accuracy_score(Y_test,Y_pred))
print("\nconfusion Matrix:",confusion_matrix(Y_test,Y_pred))
```

```
Accuracy: 1.0

confusion Matrix: [[10  0  0]
 [ 0  9  0]
 [ 0  0 11]]
```