sl-support-vector-mechanism2

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###**PROJECT TITLE**: using the support vector mechanism algorithm of supervise meachine learning ,predict iris.csv dataset to find out spices will be same or not.

###**PROBLEM STATEMENT**:A American based botinical garden a grow ice flower in their labsbut using bio technology in a single treedifferent type of verity flower is grow.as a datascience engineer find out how much accuracy is thereall categories contains same species

###**TASK1**:preprocess the data in skit learn.library ###**TASK2**:load the data using sklearn model selection default argument. ###**TASK3**:On the basis of dataset train,test and split of svm model. ###**TASK4**:Implement support vector mechanism classifier using svm_classifier.the svm must be "Linear". ###**TASK5**:Train the classifier on the traning data. ###**TASK6**:Find out the predection value on the test data. ###**TASK7**:Test the model with the help of accuracy ,accuracy should be lie in the range of 0 to 1

[1]:
```
from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.svm import SVC
from sklearn.metrics import accuracy_score
```

[2]:
```
# Load the Iris dataset
iris = load_iris()
X = iris.data
y = iris.target
```

[3]:
```
# Consider only two classes for simplicity
X = X[y != 2]
y = y[y != 2]
```

[4]:
```
# Split the dataset 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)
```

[5]:
```
# Create an SVM classifier
svm_classifier = SVC(kernel='linear')
```

[6]:
```
# Train the classifier on the training data
svm_classifier.fit(X_train, y_train)
```

[6]:
```
SVC(kernel='linear')
```

[7]:
```
# Make predictions on the test data
y_pred = svm_classifier.predict(X_test)
```

[8]:
```
# Calculate accuracy
accuracy = accuracy_score(y_test, y_pred)
print(f"Accuracy: {accuracy:.2f}")
```

```
Accuracy: 1.00
```

[ ]:
```

```

###**CONCLUSION**: According to my support vector mechanisam model the species are linear.with the accuray of 1.00 ### hence proved model was succesfully implement