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Project Title : Using support vector mechanism algorithem of suppervis machin learning,predict iris.csv dataset to find out species will be same or different

problem statement: A American based botnical garden grow iris flower in ther lab but using bio technology in a singal tree differnt type of variety flower is grow as datascience engineer find out how much aacuracy is ther all categeries contain same specias.

Task1: preprocess the data in skit.learn library

Task2:Load the data using sklearn model selection deffult argument

Task3: On the baese of your dataset train test and split your svm model

Task4:impliment support vector mechanism clasifier using svm_classifier.The svm must be "Linear"

Task5:Train the classifier on the training data

Task6:findout the prediction value on the test data

Task7:Testthe model with the help of accurecy,accuracy should lie in range of 0-1

```
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

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

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

# 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)

# Create an SVM classifier
svm_classifier = SVC(kernel='linear')


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

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

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

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

```
Accuracy: 1.00
```

#Conclusion:Accordind to my support vector mechanism model the specias are linear.with the accuracy of 1.00

Hence proved model was sussesfully impliment