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PROJECT TITLE :

Using the Support_Vector_Mechanisam Algorithm by Supervised Machine Learning, Predict "Iris.csv" data set to find out the Species will be same or different

Problem Statement :

A American based Botanical garden grow Iris flower in their labs but using bio techonology in a single Tree different types of variety flower is grow. Find out as a Data Science Engineer how much accurcy is there all category contain same spacies.

TASK :

```
  1. Preprocess the data in Skit.learn library

  2. Load the data using Sklearn model selection default argument

  3. On the basis of data train,test and split the S_V_M model

  4. Implement support vector mechanism classfier.The S_V_M must be
"Linear"

  5. Trian the classfier on the training data.

  6. Find out the prediction value on the test data.

  7. Test the model with the help of accuracy , accuracy should be lie
in the range of 0-1.
```

Conclusion :

According to my support vector mechanism model the spices are linear. By the accuracy of 1.00.

Hence proved nodel was sucessful implemt

```
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
```