

Support vector machine model using text data vectorized with TF-IDF

importing data and packages

```
In [ ]: #import data

%store -r x_text_train_tf
%store -r x_text_test_tf
%store -r y_text_train_tf
%store -r y_text_test_tf

In [ ]: #rename variables more simply for easier interpretation

x_train = x_text_train_tf
x_test = x_text_test_tf
y_train = y_text_train_tf
y_test = y_text_test_tf

In [ ]: from sklearn.metrics import (accuracy_score, recall_score, precision_score, confusion_matrix, ConfusionMatrixDisplay, f1_score)

from sklearn.svm import SVC
```

Support vector machine

```
In [ ]: svm = SVC()
svm.fit(x_test, y_test)

Out[ ]: ▼ SVC
SVC()

In [ ]: y_pred = svm.predict(x_test)

In [ ]: print("Accuracy:", accuracy_score(y_test, y_pred))

print("Precision:", precision_score(y_test, y_pred))

print("Recall:", recall_score(y_test, y_pred))

print("Recall:", f1_score(y_test, y_pred))

Accuracy: 0.994620734622908
Precision: 0.9952188304523722
Recall: 0.9926632428466617
Recall: 0.993939393939394
```