

```
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

```
df = pd.read_csv('emails.csv')
```

```
df.isna().sum()
```

```
x = df.drop(['Prediction','Email No.'], axis=1)
y = df['Prediction']
```

```
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x,y,test_size=0.2,random_state=30)
```

```
from sklearn.neighbors import KNeighborsClassifier
model = KNeighborsClassifier(n_neighbors=5)
model.fit(x_train, y_train)
y_pred = model.predict(x_test)
```

```
from sklearn.metrics import accuracy_score, confusion_matrix
accuracy = accuracy_score(y_test, y_pred)
```

```
from sklearn.svm import SVC
model = SVC(C=1.0, kernel='linear')
model.fit(x_train, y_train)
y_pred = model.predict(x_test)
```

```
from sklearn.metrics import accuracy_score, confusion_matrix
accuracy = accuracy_score(y_test, y_pred)
```

C parameter in SVM is Penalty parameter of the error term

The function of kernel is to take data as input and transform it into the required form

The goal of the SVM algorithm is to create the best line or decision boundary that can segregate n-dimensional space into classes so that we can easily put the new data point in the correct category in the future. This best decision boundary is called a hyperplane.

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