**AI POWERED SPAM CLASSIFIER**

**PHASE - 4**

**DATASET : spam.csv**

**Algorithm used: MultinomialNB**

The model is trained using the training data.

The model's performance is evaluated by

* calculating accuracy
* generating a confusion matrix
* creating a classification report.

**Source code : Development part-2**

import pandas as pd

from sklearn.model\_selection import train\_test\_split

from sklearn.feature\_extraction.text import CountVectorizer

from sklearn.naive\_bayes import MultinomialNB

from sklearn.metrics import accuracy\_score, confusion\_matrix, classification\_report

data = pd.read\_csv('spam.csv')

X = data['text']

y = data['label']

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.2, random\_state=42)

vectorizer = CountVectorizer()

X\_train\_vectorized = vectorizer.fit\_transform(X\_train)

X\_test\_vectorized = vectorizer.transform(X\_test)

classifier = MultinomialNB()

classifier.fit(X\_train\_vectorized, y\_train)

y\_pred = classifier.predict(X\_test\_vectorized)

accuracy = accuracy\_score(y\_test, y\_pred)

confusion = confusion\_matrix(y\_test, y\_pred)

classification\_report\_str = classification\_report(y\_test, y\_pred)

print(f"Accuracy: {accuracy}")

print("Confusion Matrix:")

print(confusion)

print("Classification Report:")

print(classification\_report\_str)