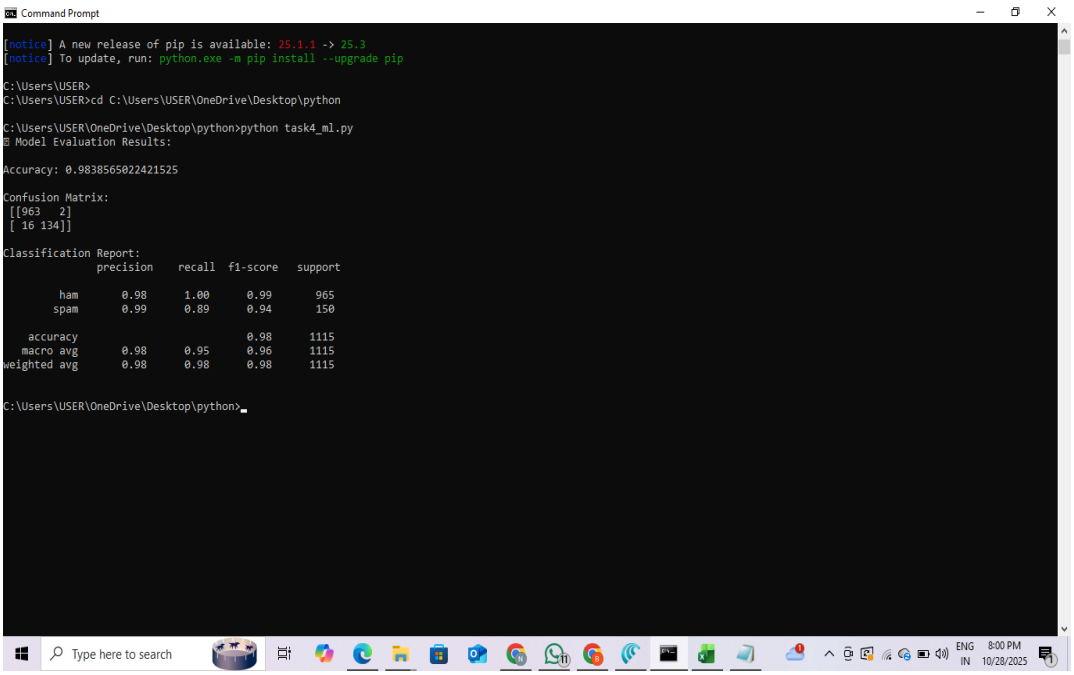
CODTECH Internship - Task 4 Report

Objective:
Create a predictive model using scikit-learn to classify or predict outcomes from a dataset (e.g., spam email detection).

Tools & Libraries Used:
- Python 3
- pandas (for data handling)
- scikit-learn (for machine learning)
- Naive Bayes classifier
- CountVectorizer (for text feature extraction)

Implementation Summary:
A machine learning model was built using the Naive Bayes algorithm to classify SMS messages as 'spam' or 'ham' (not spam). The dataset was preprocessed using CountVectorizer to convert text into numerical features. The data was split into training and testing sets, and the model achieved high accuracy on evaluation.

Model Output and Accuracy:



Conclusion:
This task successfully demonstrates the implementation of a text classification model using scikit-learn. The Naive Bayes algorithm effectively detects spam messages, achieving high accuracy and strong performance metrics.