Spam Email Classification using SVM

Objective:

Build a machine learning model to classify emails as SPAM or HAM using Support Vector Machine (SVM).
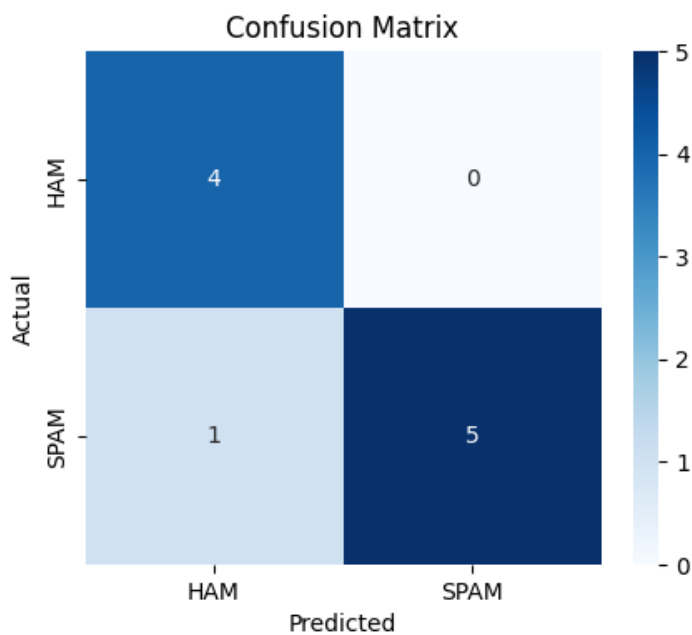
Dataset:

Embedded dataset of 50 emails with labels 'ham' or 'spam'. Labels converted to binary: ham=0, spam=1.

Methodology:

- Train/Test split: 80%/20%
- Pipeline: CountVectorizer -> TFIDF -> LinearSVC
- Evaluation metrics: Accuracy, Classification Report, Confusion Matrix

Results:

Accuracy: 90.00%

Classification Report Summary:

HAM - Precision: 0.80, Recall: 1.00, F1-score: 0.89
SPAM - Precision: 1.00, Recall: 0.83, F1-score: 0.91