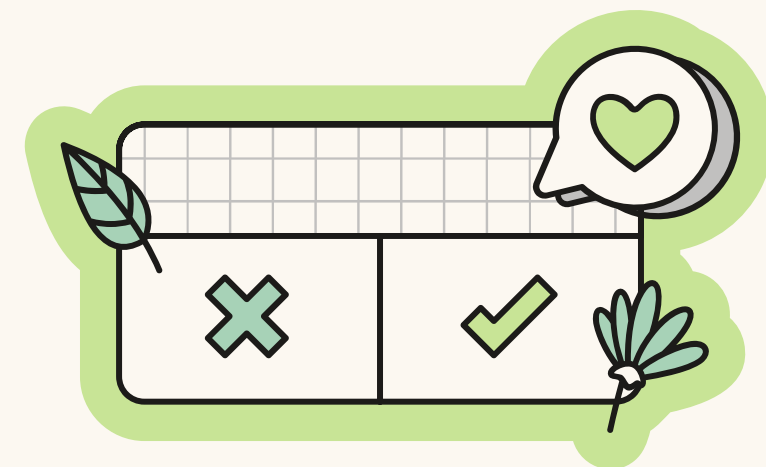




SENTIMENT ANALYSIS PROJECT

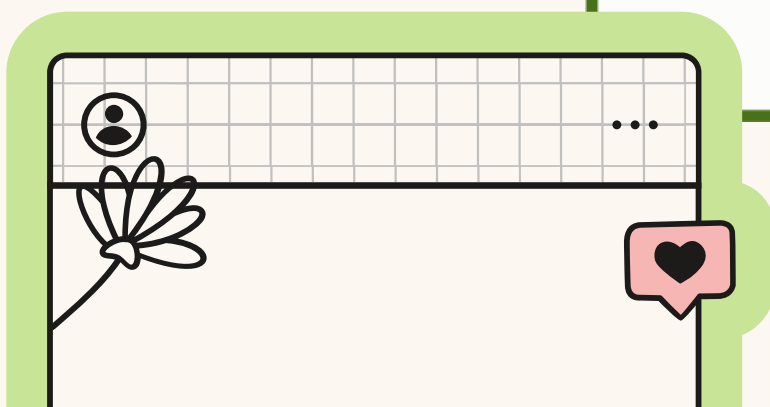
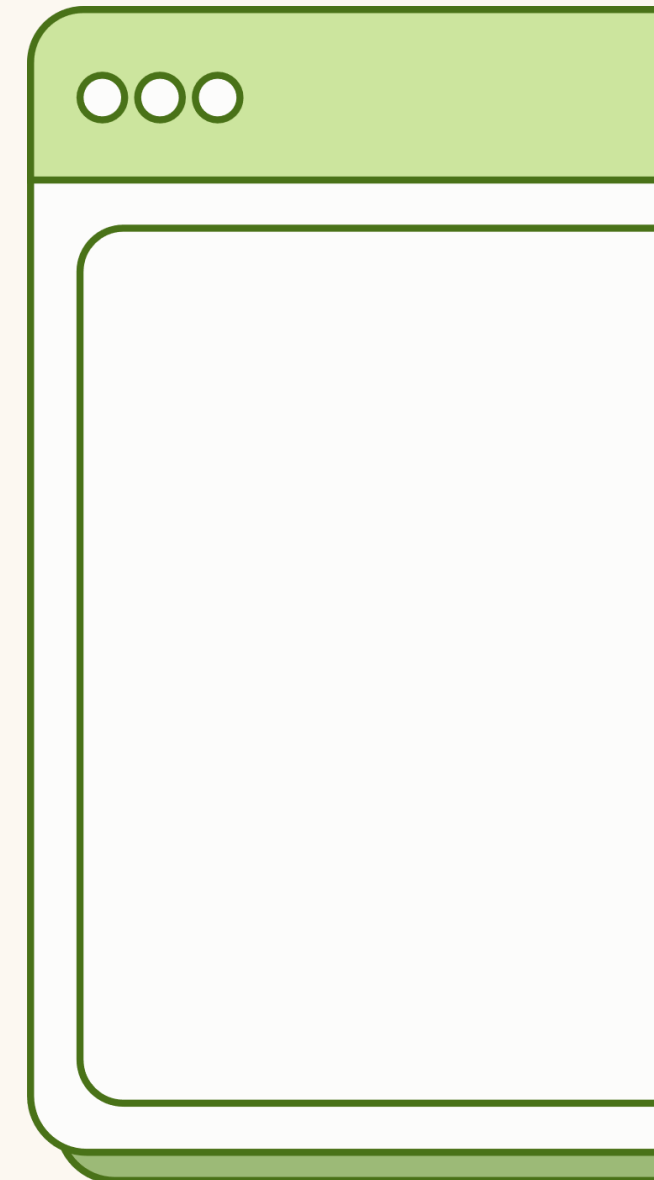
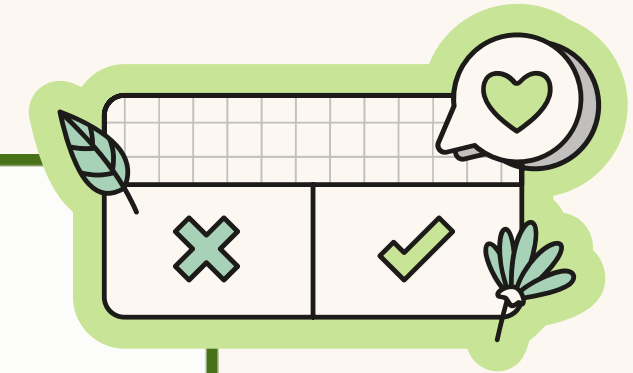


Submitted to Dr. Hala Hamdoun




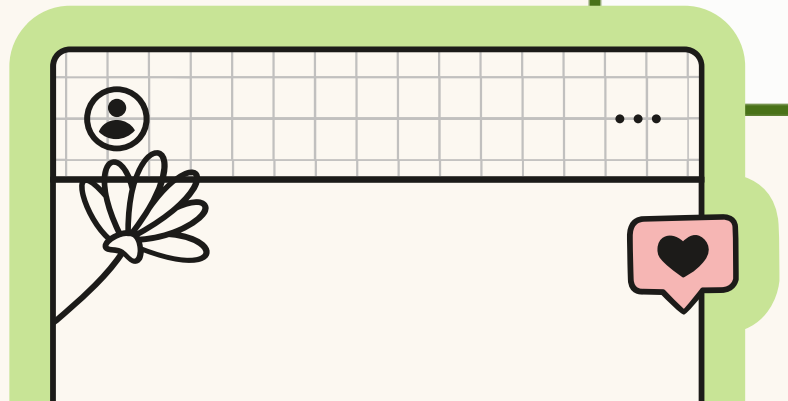
OUR TEAM

- Narjes Alammam
22|43|49
- Mithaq Alhulaimi
22|426272
- Khulood Almarri
22|445583



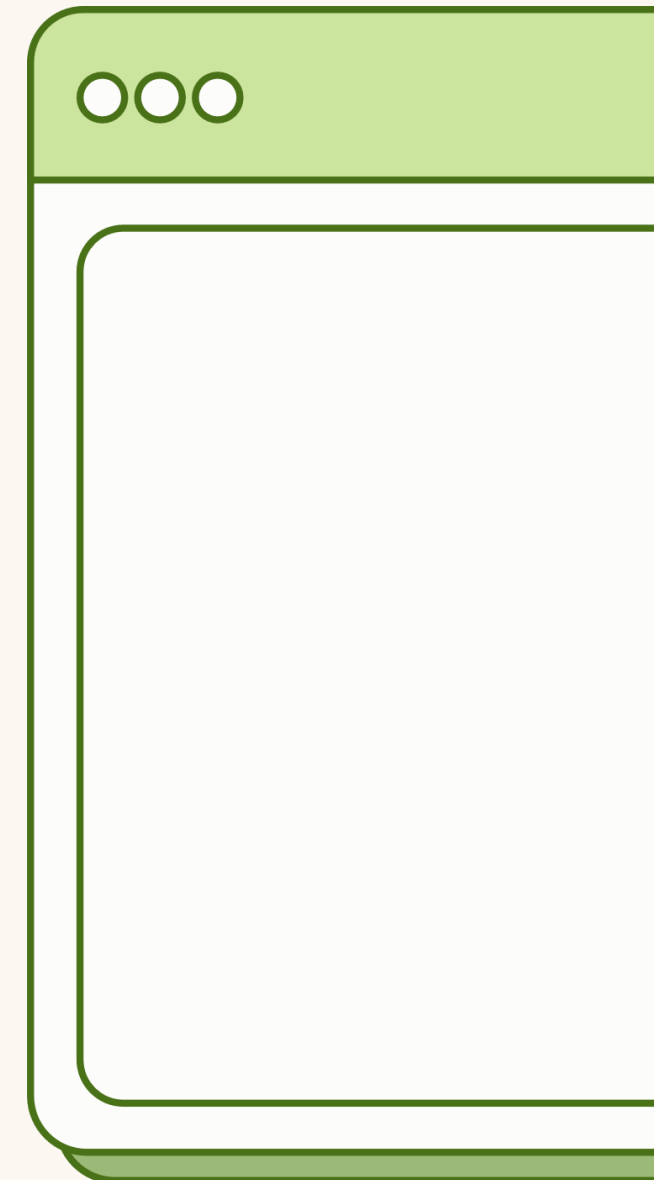
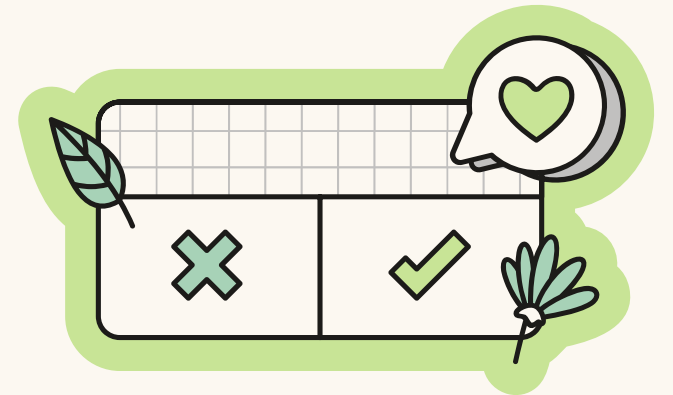


INTRODUCTION

- What is Sentiment Analysis?
A method in natural language processing (NLP) that determines the emotional tone of text.
Commonly used to analyze opinions in social media, reviews, and other textual data.
 - Project Overview
 - 1- Focus on classifying movie reviews as positive or negative.
 - 2- Utilize various machine learning models for effective classification.
- 
- 

GOALS

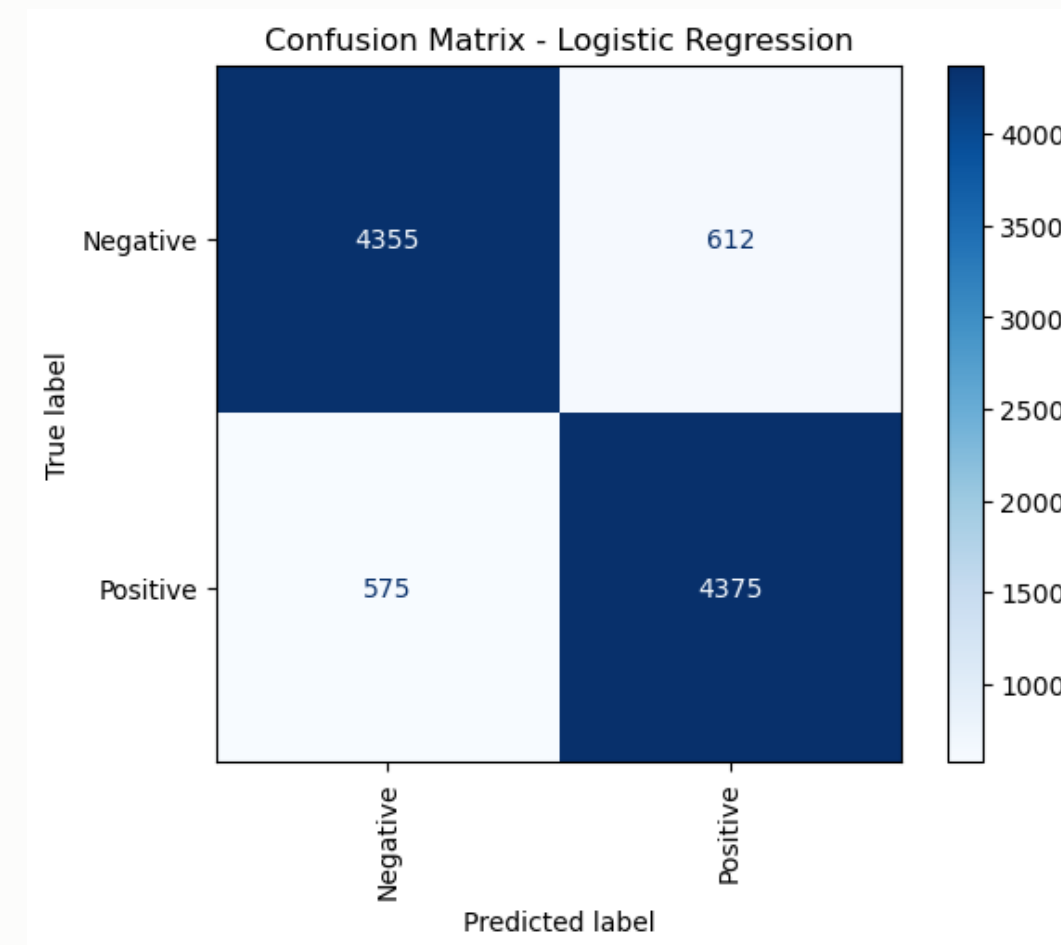
- Classify Movie Reviews
Aim to accurately label reviews as positive (1) or negative (0).
- Model Development
Implement and compare multiple machine learning algorithms:
 1. Logistic Regression (LR)
 2. Support Vector Machine (SVM)
 3. Naive Bayes (NB)
- Process Steps
 1. Data processing and cleaning
 2. Text vectorization
 3. Model training and evaluation
 4. Deployment for future predictions



OUTCOMES

Logistic Regression Results:

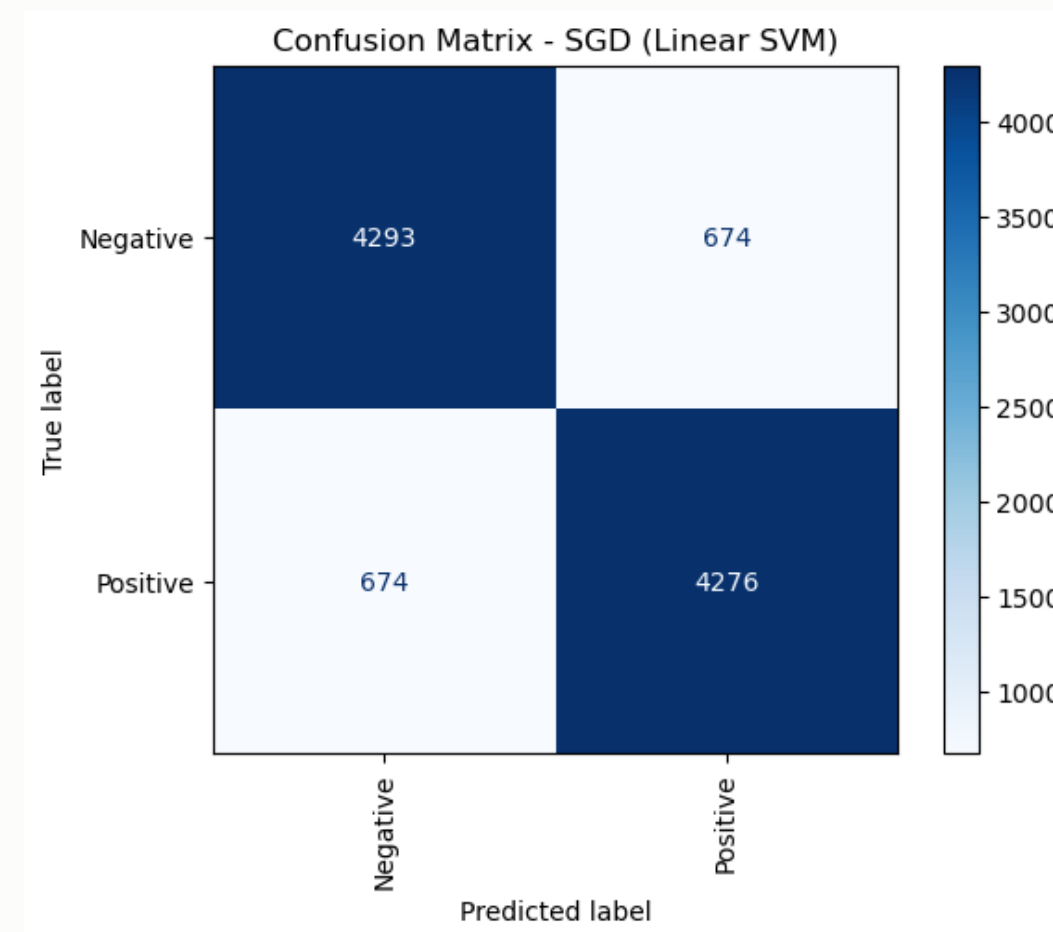
- Accuracy: 88.03%
- Balanced performance for both positive and negative classes
- Precision, Recall, and F1-score: 0.88



OUTCOMES

Support Vector Machine Results:

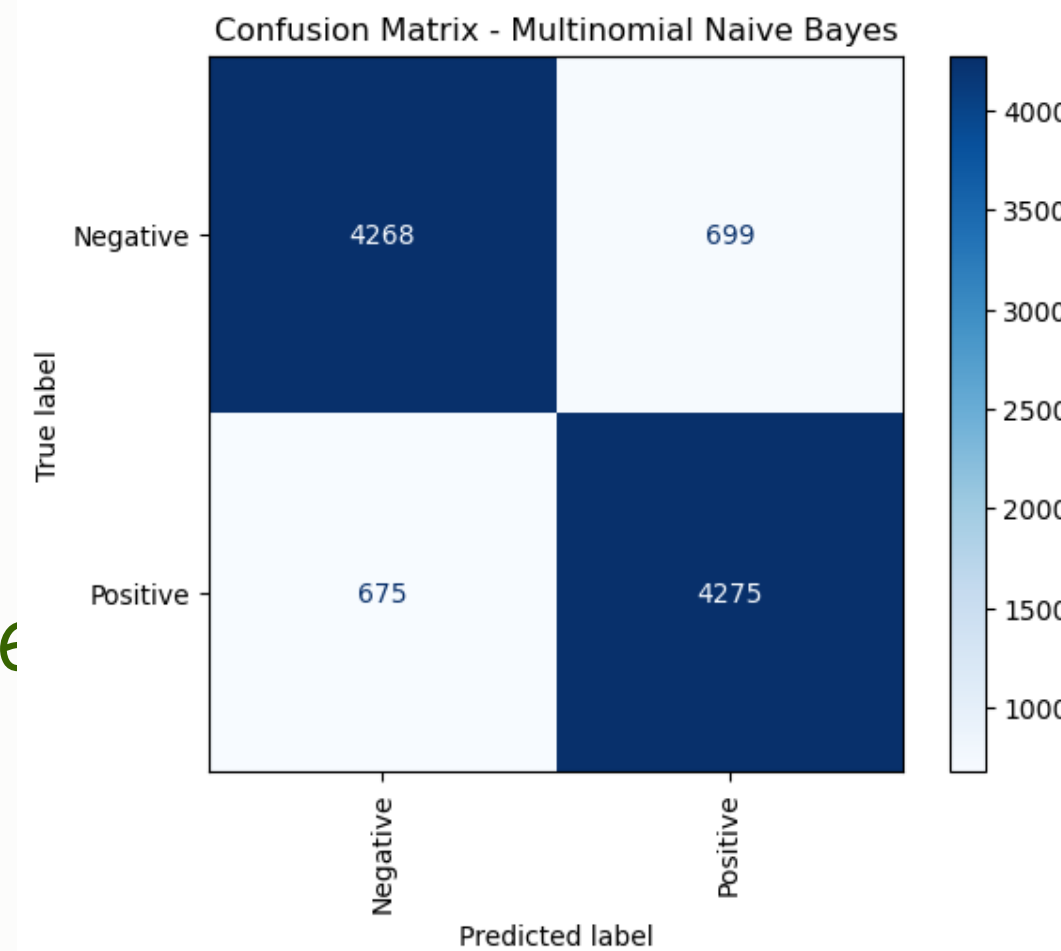
- Accuracy: 86.41%
- Balanced performance for both positive and negative classes
- Precision, Recall, and F1-score: 0.86



OUTCOMES

Naive Bayes Results:

- Accuracy: 86.14%
- Balanced performance for both positive and negative classes
- Precision, Recall, and F1-score: 0.86



CONCLUSION

We built and evaluated three sentiment analysis models: Logistic Regression, Support Vector Machine, and Naive Bayes.

- Logistic Regression: 88.03% accuracy (best performance)
- Support Vector Machine: 86.41% accuracy
- Naive Bayes: 86.14% accuracy

These models are ready for predicting the sentiment of new movie reviews, showcasing the practical applications of machine learning in sentiment analysis.

