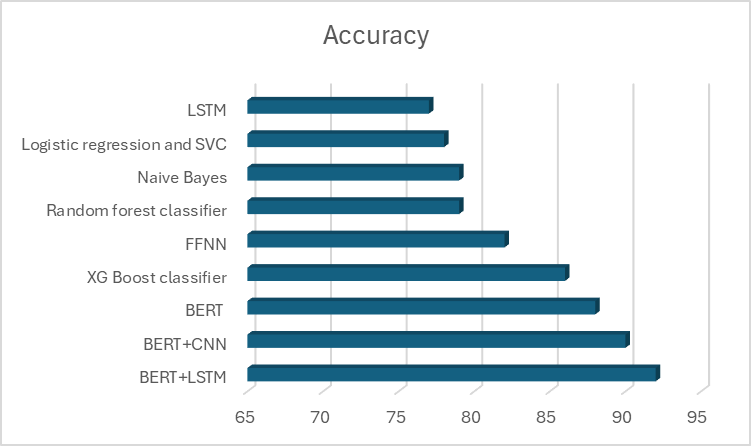
Results

Results

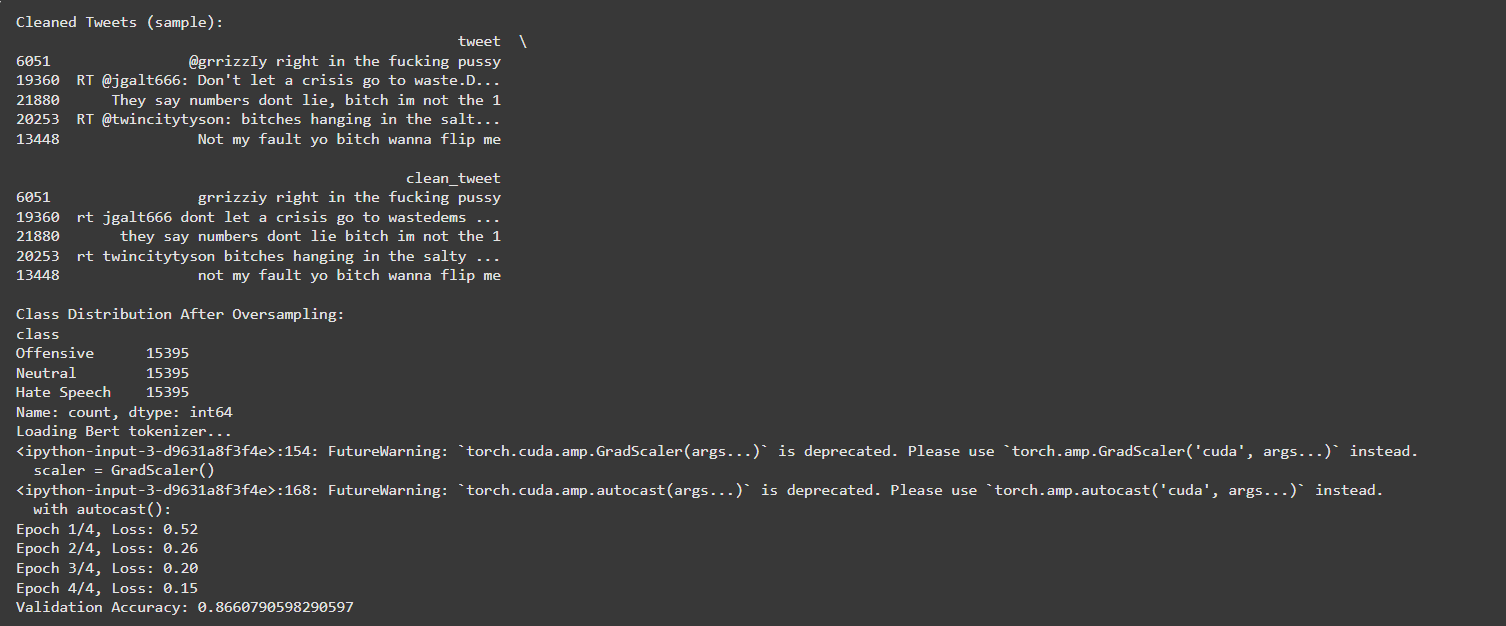
# **Accuracies comparison of models used:**



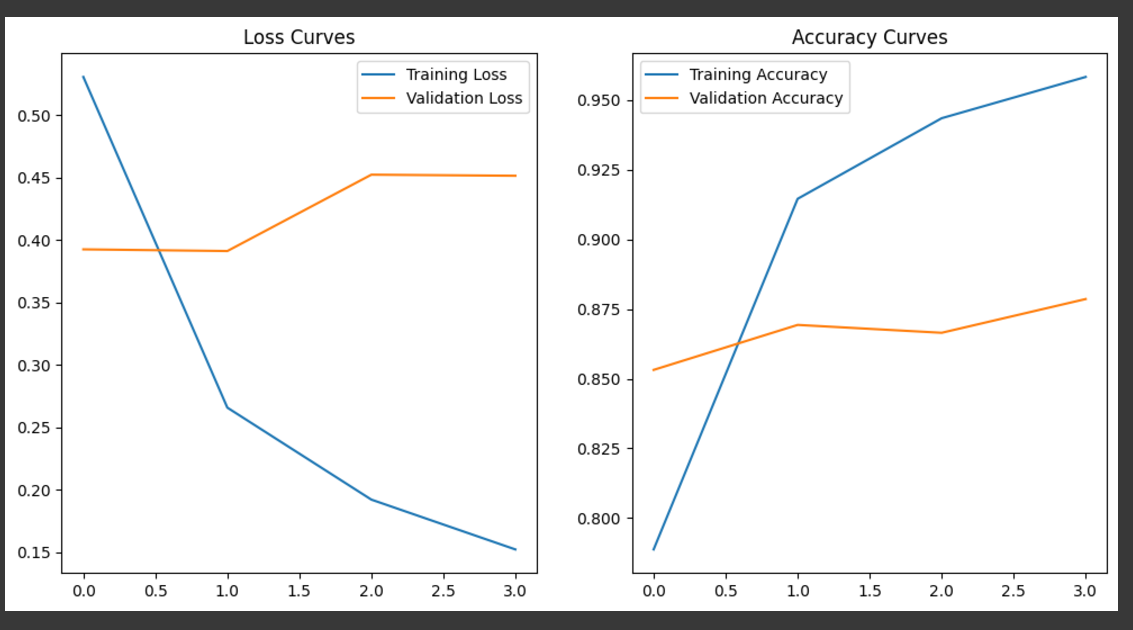
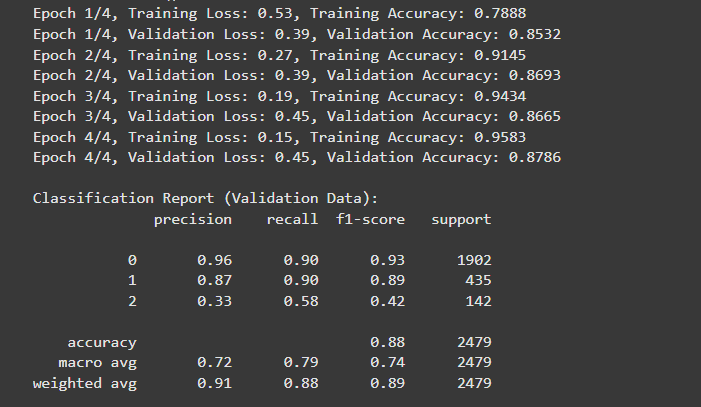
**Results of models used are given below:**

# BERT+LSTM - Experimental optimisation

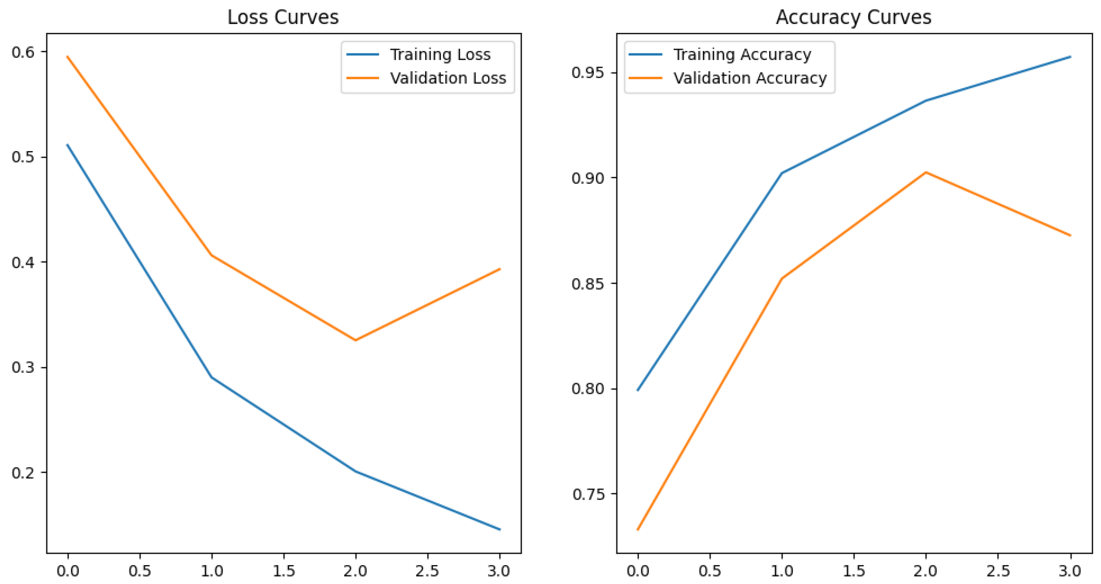
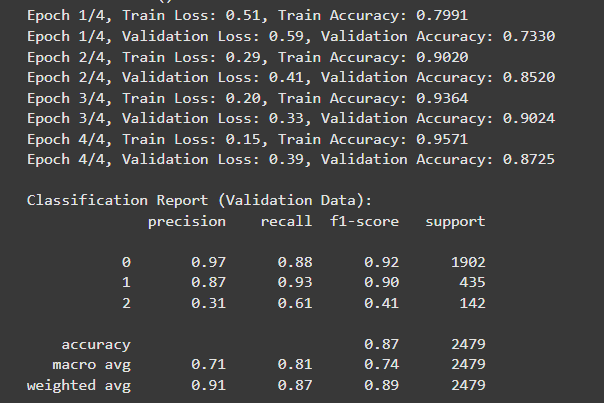
STEP 1: Data Preprocessing



STEP 2: FEATURE ENGINEERING

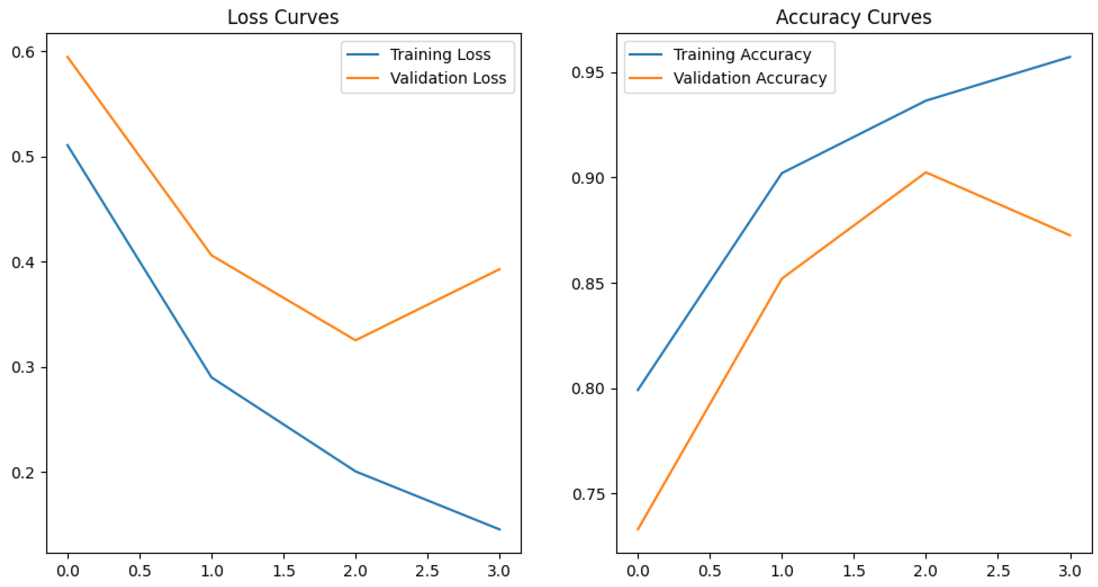
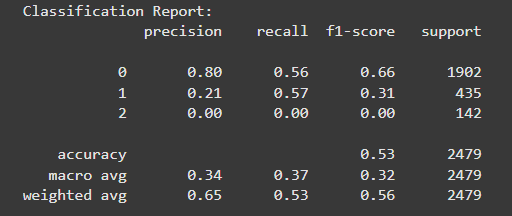


STEP 3: Training optimization

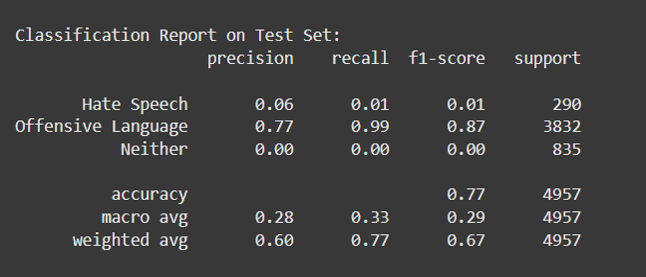


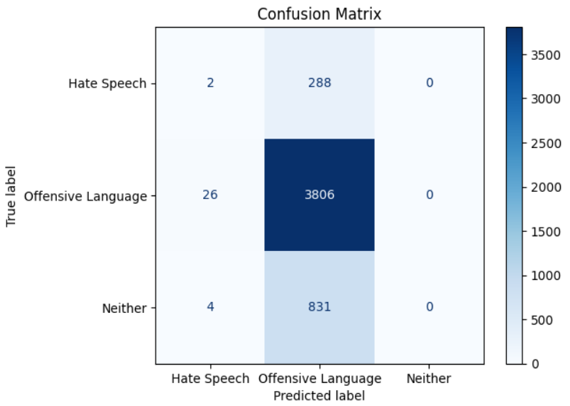
STEP 4:

* Layer Freezing:Fine-tune only the top layers of BERT initially (freeze lower layers):
* Dropout Regularization:Add dropout layers after the LSTM and fully connected layers:
* Multi-Head Attention:Integrate a multi-head attention mechanism after the LSTM to capture relationships more effectively.
* Hierarchical Attention:Use a hierarchical attention network (HAN) to focus on more informative words and sentences.
* L2 regularization (weight decay)

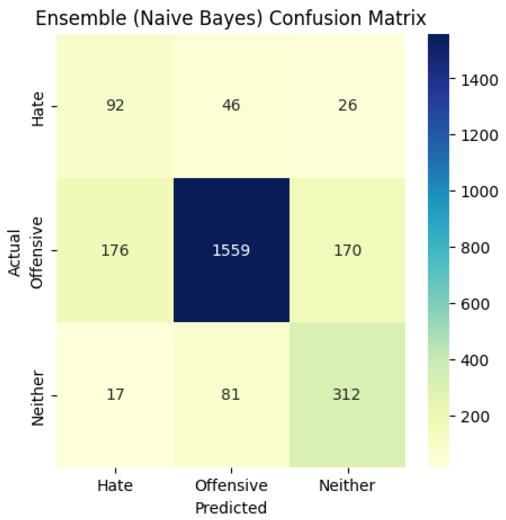
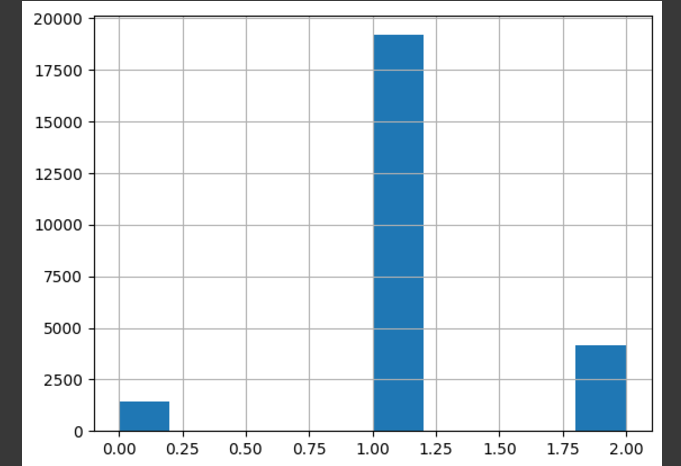
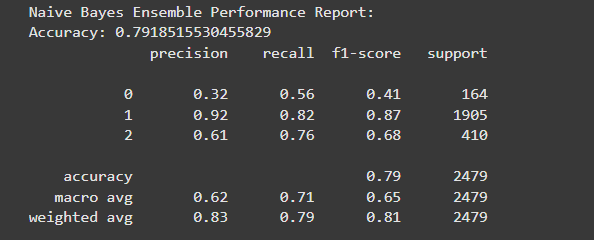


# LSTM

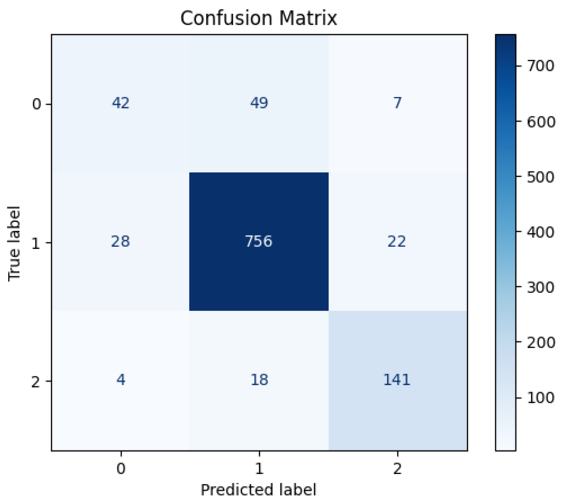
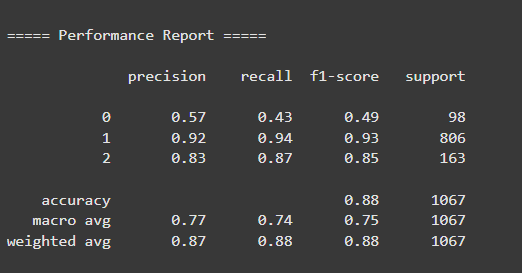
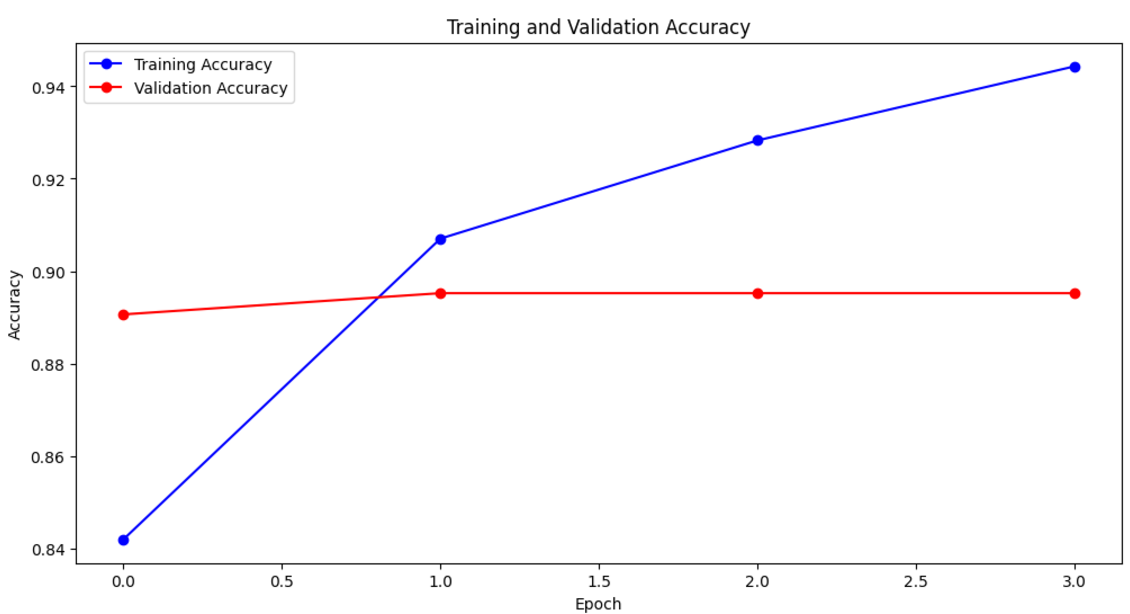
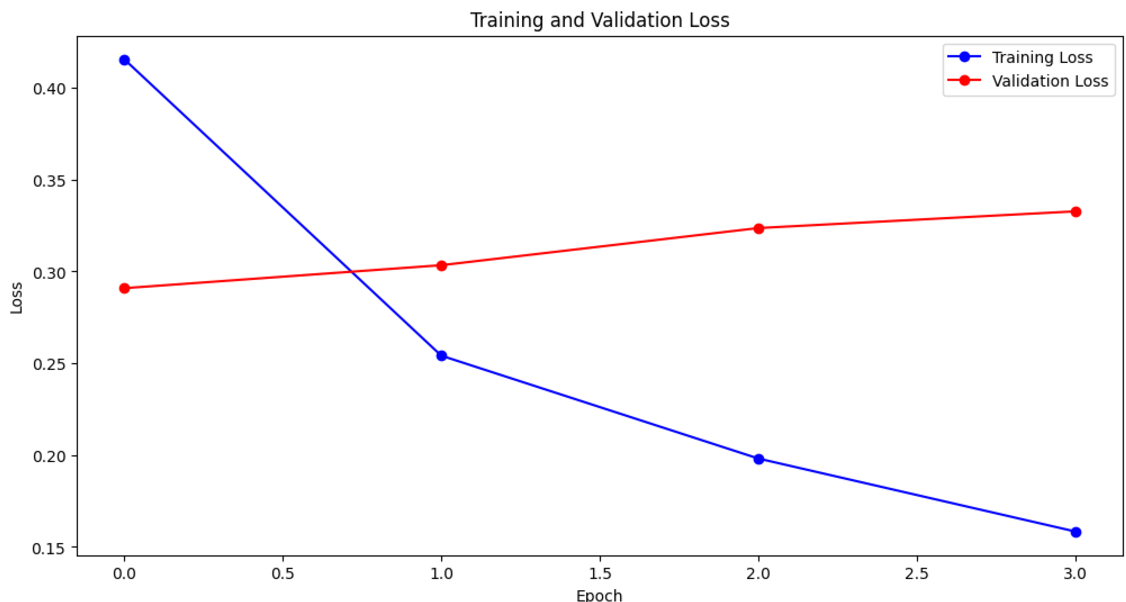




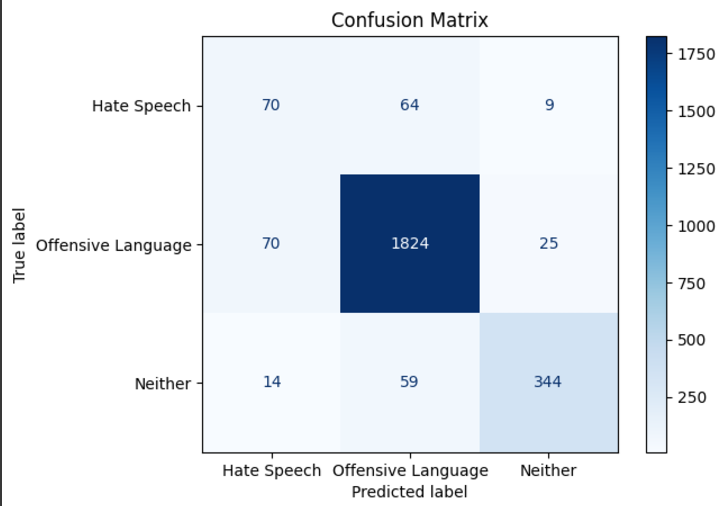
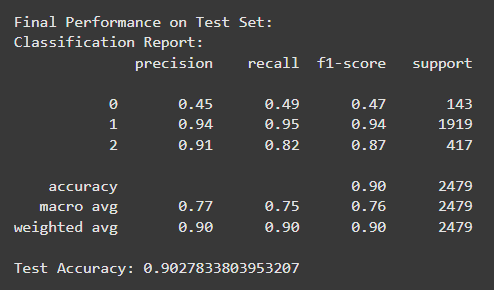
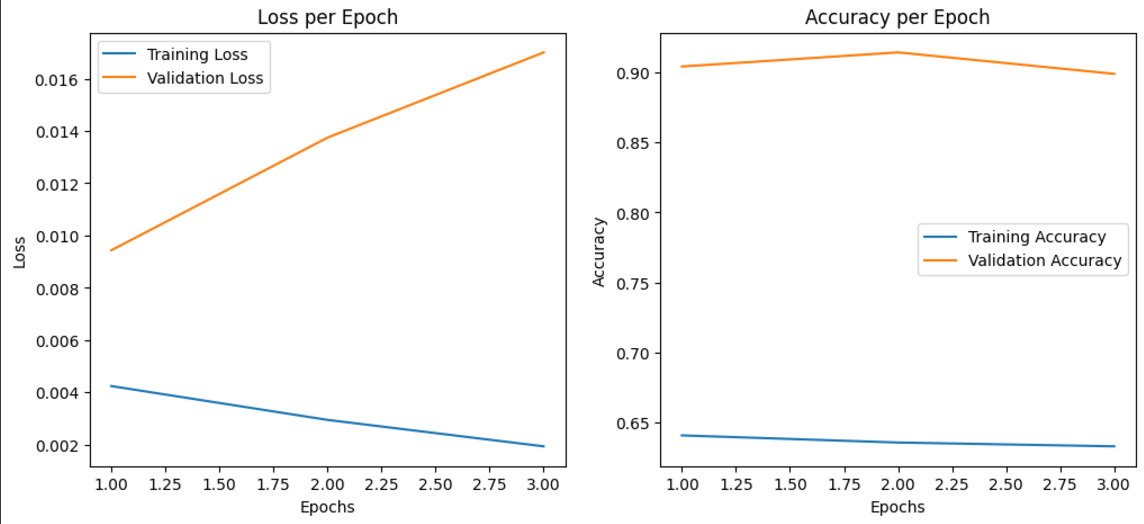
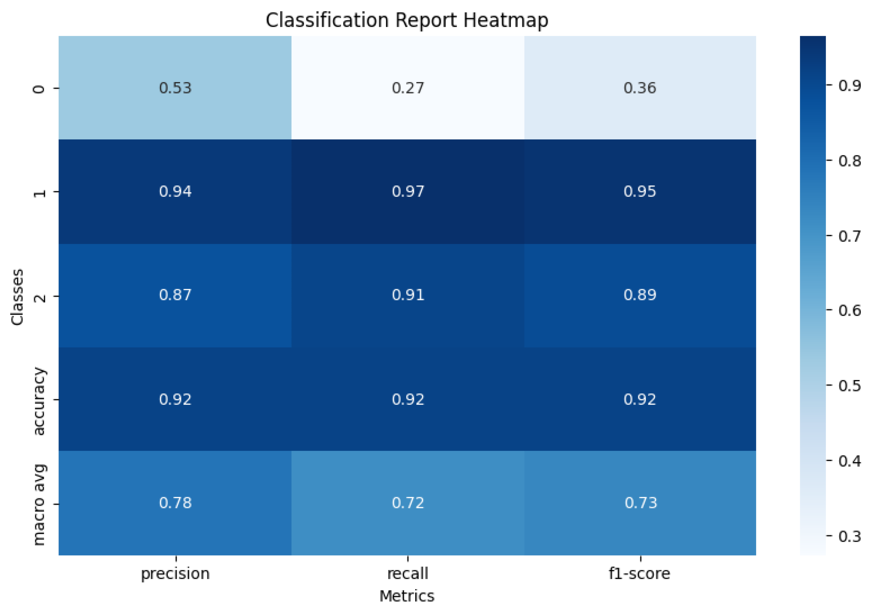
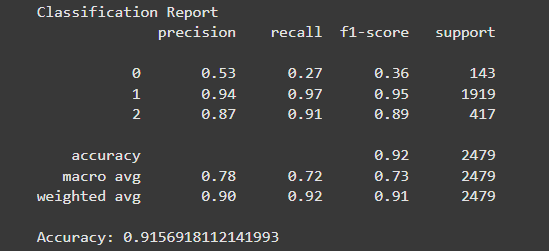
# Naive Bayes:



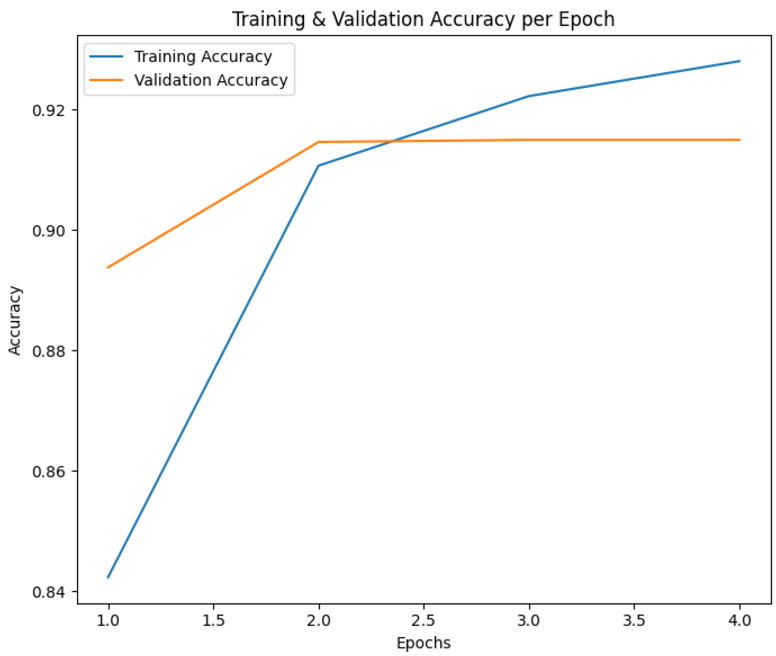
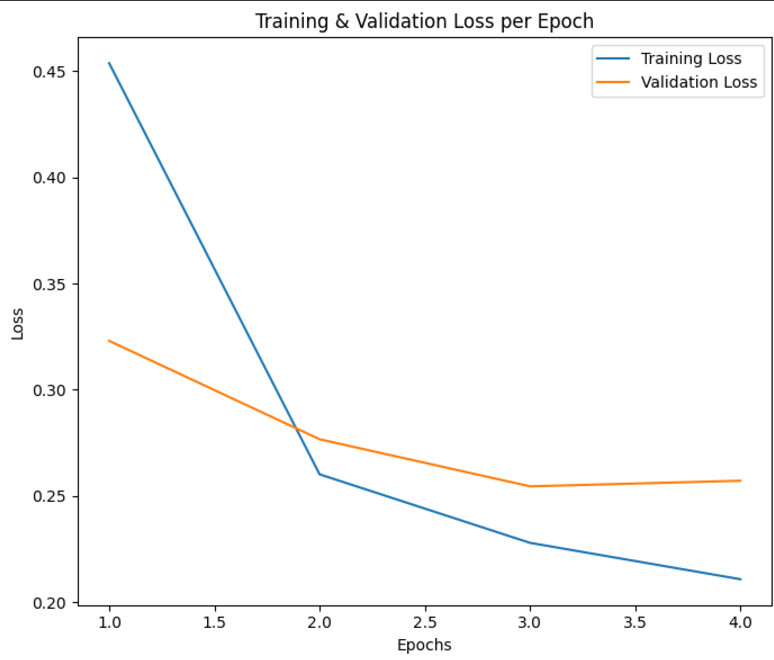
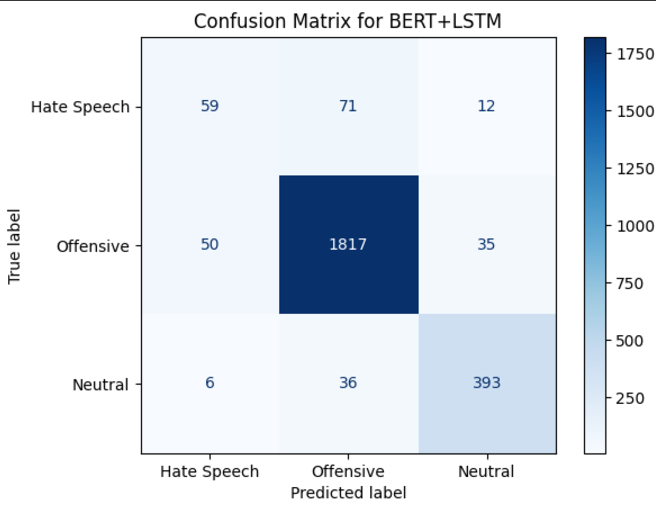
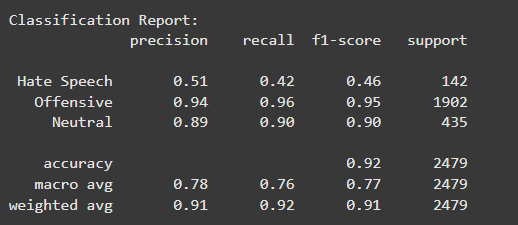
# BERT



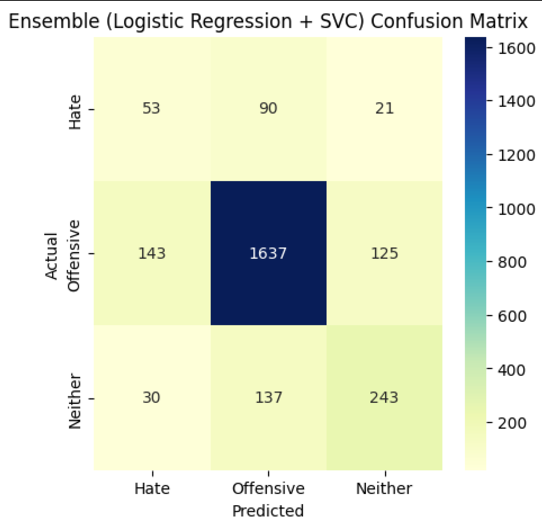
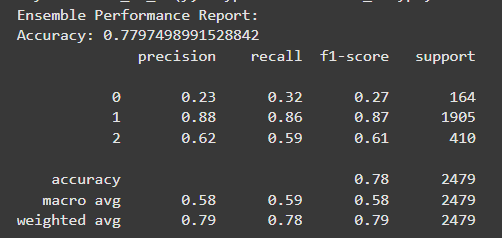
# BERT+CNN



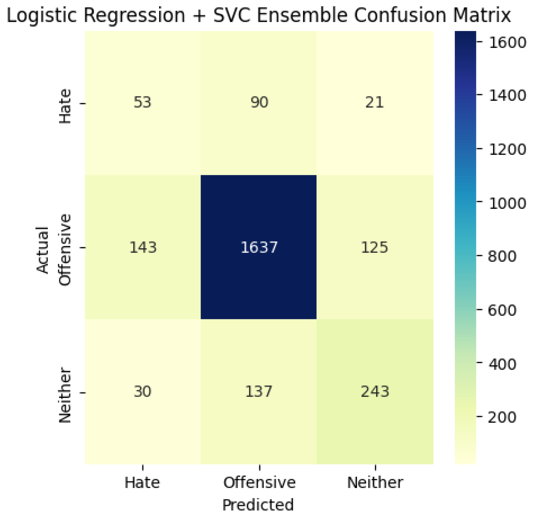
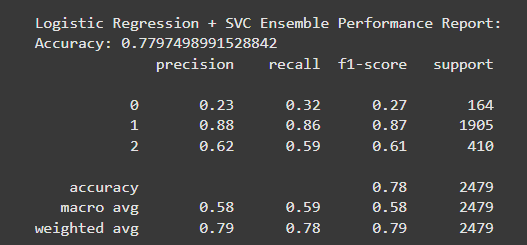
# BERT+LSTM (Final)



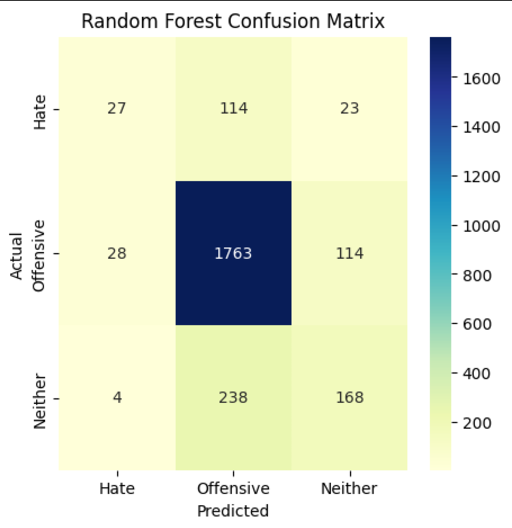
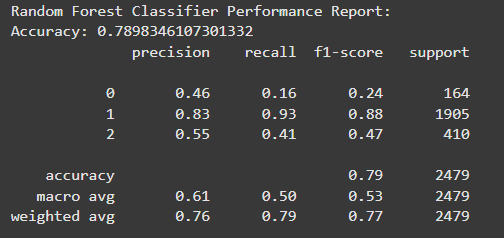
# Logistic regression and SVC with K-Fold



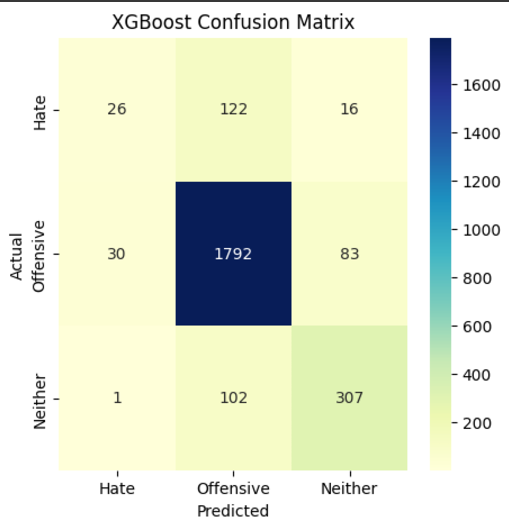
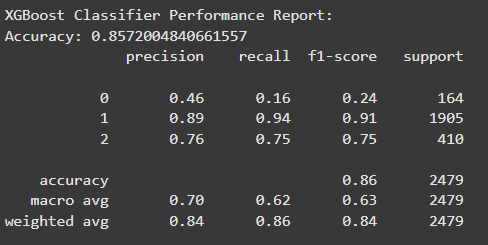
# Logistic regression and SVC



# Random forest classifier



# XGBoost classifier



# FEEDFORWARD NEURAL NETWORK (FFNN)

