LSTM Model for Hate Speech Classification

Architecture

Sequential Model:

- Masking Layer (input_shape=(sequence_length, 300))

- LSTM (units=256, return_sequences=True, dropout=0.5)

- LSTM (units=128, dropout=0.5)

- Dense (units=64, activation='relu')

- Dropout (rate=0.5)

- Dense (units=3, activation='softmax')

Training Details

Word2Vec embeddings (300d)

Adam optimizer (lr=0.001)

Batch size: 64

Early stopping on validation loss

Performance:

```
cnn_model Evaluation:
Accuracy: 0.9070
Precision: 0.8551
Recall: 0.9070
F1 Score: 0.8802
```