```
C:\Users\jiho\PycharmProjectsMyWork\intel_AI_classification_team4\.venv\Scripts\python.exe C:\Users\jiho\PycharmProjectsMyWork\intel_AI_classification_team4\modeling.py
(17152, 23) (17152, 8)
(4289, 23) (4289, 8)
2024-01-30 14:24:42.415858: I tensorflow/core/platform/cpu_feature_guard.cc:182] This TensorFlow binary is optimized to use available CPU instructions in performance-critical operations.
To enable the following instructions: SSE SSE2 SSE3 SSE4.1 SSE4.2 AVX AVX2 FMA, in other operations, rebuild TensorFlow with the appropriate compiler flags.
Model: "sequential"
_________________________________________________________________
 Layer (type)                Output Shape              Param #
=================================================================
 embedding (Embedding)       (None, 23, 300)           3765300

 conv1d (Conv1D)             (None, 23, 32)            48032

 max_pooling1d (MaxPooling1  (None, 23, 32)            0
 D)

 lstm (LSTM)                 (None, 23, 128)           82432

 dropout (Dropout)           (None, 23, 128)           0

 lstm_1 (LSTM)               (None, 23, 64)            49408

 dropout_1 (Dropout)         (None, 23, 64)            0

 lstm_2 (LSTM)               (None, 64)                33024

 dropout_2 (Dropout)         (None, 64)                0

 flatten (Flatten)           (None, 64)                0

 dense (Dense)               (None, 128)               8320

 dense_1 (Dense)             (None, 8)                 1032

=================================================================
Total params: 3987548 (15.21 MB)
Trainable params: 3987548 (15.21 MB)
Non-trainable params: 0 (0.00 Byte)
_________________________________________________________________
Epoch 1/10
134/134 [==============================] - 28s 171ms/step - loss: 1.8823 - accuracy: 0.2417 - val_loss: 1.4715 - val_accuracy: 0.4675
Epoch 2/10
134/134 [==============================] - 18s 136ms/step - loss: 1.2734 - accuracy: 0.5406 - val_loss: 1.2519 - val_accuracy: 0.5463
Epoch 3/10
134/134 [==============================] - 19s 141ms/step - loss: 0.9826 - accuracy: 0.6703 - val_loss: 1.2625 - val_accuracy: 0.5701
Epoch 4/10
134/134 [==============================] - 19s 145ms/step - loss: 0.8253 - accuracy: 0.7321 - val_loss: 1.3229 - val_accuracy: 0.5586
Epoch 5/10
134/134 [==============================] - 19s 138ms/step - loss: 0.7138 - accuracy: 0.7648
```

```
 - val_loss: 1.3884 - val_accuracy: 0.5726
Epoch 6/10
134/134 [==============================] - 18s 131ms/step - loss: 0.6291 - accuracy: 0.7926
 - val_loss: 1.4239 - val_accuracy: 0.5677
Epoch 7/10
134/134 [==============================] - 17s 130ms/step - loss: 0.5656 - accuracy: 0.8084
 - val_loss: 1.5753 - val_accuracy: 0.5589
Epoch 8/10
134/134 [==============================] - 18s 132ms/step - loss: 0.5141 - accuracy: 0.8178
 - val_loss: 1.6596 - val_accuracy: 0.5535
Epoch 9/10
134/134 [==============================] - 19s 141ms/step - loss: 0.4740 - accuracy: 0.8254
 - val_loss: 1.7425 - val_accuracy: 0.5472
Epoch 10/10
134/134 [==============================] - 19s 143ms/step - loss: 0.4416 - accuracy: 0.8335
 - val_loss: 1.8828 - val_accuracy: 0.5542
C:\Users\jiho\PycharmProjectsMyWork\intel_AI_classification_team4\.venv\lib\site-packages\
keras\src\engine\training.py:3000: UserWarning: You are saving your model as an HDF5 file
via `model.save()`. This file format is considered legacy. We recommend using instead the
native Keras format, e.g. `model.save('my_model.keras')`.
  saving_api.save_model(

Process finished with exit code 0

```