

[255/255 00:51, Epoch 5/5]

| Epoch | Training Loss | Validation Loss | Accuracy | Precision | Recall | F1 |
|-------|---------------|-----------------|----------|-----------|----------|----------|
| 1 | 0.662100 | 0.588391 | 0.687500 | 0.701534 | 0.687500 | 0.681963 |
| 2 | 0.508200 | 0.563485 | 0.715278 | 0.720423 | 0.715278 | 0.713607 |
| 3 | 0.373400 | 0.557983 | 0.729167 | 0.739564 | 0.729167 | 0.726196 |
| 4 | 0.305700 | 0.549362 | 0.777778 | 0.779720 | 0.777778 | 0.777391 |
| 5 | 0.248300 | 0.543782 | 0.791667 | 0.791892 | 0.791667 | 0.791626 |

```
[8]: {'train_runtime': 51.5252,  
      'train_samples_per_second': 79.185,  
      'train_steps_per_second': 4.949,  
      'total_flos': 47162533527744.0,  
      'train_loss': 0.41638573291254977,  
      'epoch': 5.0}
```

```
Evaluating on validation data...  
{  
  'epoch': 5.0,  
  'eval_accuracy': 0.7916666666666666,  
  'eval_f1': 0.7916264711557013,  
  'eval_loss': 0.5437819957733154,  
  'eval_precision': 0.791891891891892,  
  'eval_recall': 0.7916666666666666,  
  'eval_runtime': 0.1667,  
  'eval_samples_per_second': 864.048,  
  'eval_steps_per_second': 54.003}
```

```
Final Validation Summary:  
Accuracy: 0.7917  
F1 Score: 0.7916  
Precision: 0.7919  
Recall: 0.7917
```

Best Epoch Summary (by F1):

```
Best epoch: 5.0  
Accuracy: 0.7917  
F1 Score: 0.7916  
Precision: 0.7919  
Recall: 0.7917  
Best checkpoint: outputs/checkpoint-255
```