```
 1 /Users/yaizaaragonessoria/anaconda3/envs/
   chatbot_for_QC/bin/python /Users/yaizaaragonessoria
   /Documents/Constructor/Chatbot for QC/chatbot4QC/
   backend/chatbot/LLM.py
 2 Some weights of BertForSequenceClassification were
   not initialized from the model checkpoint at bert-
   base-uncased and are newly initialized: ['
   classifier.bias', 'classifier.weight']
 3 You should probably TRAIN this model on a down-
   stream task to be able to use it for predictions
   and inference.
 4 /Users/yaizaaragonessoria/anaconda3/envs/
   chatbot_for_QC/lib/python3.11/site-packages/
   transformers/optimization.py:411: FutureWarning:
   This implementation of AdamW is deprecated and will
    be removed in a future version. Use the PyTorch
   implementation torch.optim.AdamW instead, or set `
   no_deprecation_warning=True` to disable this
   warning
 5   warnings.warn(
 6 starting_epoch  0
 7 epochs  4
 8 Batch    40  of    286. Loss: 0.6373435348272324.
 9 Batch    80  of    286. Loss: 0.3468811347614974.
10 Batch   120  of    286. Loss: 0.23380614509029934.
11 Batch   160  of    286. Loss: 0.1783521678444231.
12 Batch   200  of    286. Loss: 0.14316652095178142.
13 Batch   240  of    286. Loss: 0.1195800980897426 3.
14 Batch   280  of    286. Loss: 0.10296323411416129.
15
16 Epoch: 1/4
17 Training Loss: 0.10083196521329635
18 Training Accuracy: 0.9997814685314685
19 Validation Loss: 0.0026386052995803766
20 Validation Accuracy: 0.9991319444444444
21
22 Batch    40  of    286. Loss: 0.001052536105271429.
23 Batch    80  of    286. Loss: 0.00095263313560280 95
   .
24 Batch   120  of    286. Loss: 0.000881128963859131.
25 Batch   160  of    286. Loss: 0.000823806423977657 7
```

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25 .
26 Batch    200  of    286. Loss: 0.0007774821449129377
   .
27 Batch    240  of    286. Loss: 0.0007368471512260536
   .
28 Batch    280  of    286. Loss: 0.0007002589853073004
   .
29
30 Epoch: 2/4
31 Training Loss: 0.0006965578400808341
32 Training Accuracy: 1.0
33 Validation Loss: 0.0003069545978683487
34 Validation Accuracy: 1.0
35
36 Batch     40  of    286. Loss: 0.000450560273748124.
37 Batch     80  of    286. Loss: 0.00043362130309105855
   .
38 Batch    120  of    286. Loss: 0.
   00041933009779313577.
39 Batch    160  of    286. Loss: 0.0004088244588274392
   .
40 Batch    200  of    286. Loss: 0.0003987270848301705
   .
41 Batch    240  of    286. Loss: 0.
   00038932719835429455.
42 Batch    280  of    286. Loss: 0.
   00038076587994250333.
43
44 Epoch: 3/4
45 Training Loss: 0.0003803026607224288
46 Training Accuracy: 1.0
47 Validation Loss: 0.00021261646482647242
48 Validation Accuracy: 1.0
49
50 Batch     40  of    286. Loss: 0.
   00032387981191277503.
51 Batch     80  of    286. Loss: 0.
   00031412539865414144.
52 Batch    120  of    286. Loss: 0.0003125786769184439
   .
53 Batch    160  of    286. Loss: 0.
```

```
53 00030615778705396225.
54 Batch    200  of    286. Loss: 0.0003042974272830179
   .
55 Batch    240  of    286. Loss: 0.0003016461212610011
   .
56 Batch    280  of    286. Loss: 0.0002996787502135183
   .
57
58 Epoch: 4/4
59 Training Loss: 0.00029940333347422882
60 Training Accuracy: 1.0
61 Validation Loss: 0.00018927781962298063
62 Validation Accuracy: 1.0
63
64
65 Process finished with exit code 0
66
```