DNN:
python3 DNN_classification.py
Processing: bert-base-cased
Accuracy: 0.9652122641509434
Precision: 0.9651837227096796
Recall: 0.9649792115315636
F1-Score: 0.9650784133823272
Confusion Matrix:
[[766 31]
 [28 871]]

Processing: bert-base-uncased
Accuracy: 0.9681603773584906
Precision: 0.9684211114885313
Recall: 0.9676889001162592
F1-Score: 0.9680209171359614
Confusion Matrix:
[[765 32]
 [22 877]]

Processing: digitalepidemiologylab_covid-twitter-bert
Accuracy: 0.972877358490566
Precision: 0.9729163960959615
Recall: 0.9726365416474181
F1-Score: 0.972770995190529
Confusion Matrix:
[[772 25]
 [21 878]]

Processing: sarkerlab_SocBERT-base
Accuracy: 0.9510613207547169
Precision: 0.9514556179240796
Recall: 0.950349824076103
F1-Score: 0.9508273055726235
Confusion Matrix:
[[748 49]
 [34 865]]

Processing: Twitter_twhin-bert-base
Accuracy: 0.9658018867924528
Precision: 0.9662362441755877
Recall: 0.9651794898276769
F1-Score: 0.9656411546092156
Confusion Matrix:
[[761 36]
 [22 877]]

CNN:
Results for bert-base-cased with 1D-CNN:
Accuracy: 0.7806603773584906
Precision: 0.78109774500927
Recall: 0.7820706961450266
F1-Score: 0.7805383022774327
Confusion Matrix:
[[642 155]
 [217 682]]

Results for bert-base-uncased with 1D-CNN:
Accuracy: 0.8142688679245284
Precision: 0.8204383653468321
Recall: 0.8095730234206975
F1-Score: 0.811235354787009
Confusion Matrix:
[[583 214]
 [101 798]]

Results for digitalepidemiologylab_covid-twitter-bert with 1D-CNN:
Accuracy: 0.7706367924528302
Precision: 0.7698863636363636
Recall: 0.7704803748204823
F1-Score: 0.7700861500867564
Confusion Matrix:
[[612 185]
 [204 695]]

Results for sarkerlab_SocBERT-base with 1D-CNN:
Accuracy: 0.7470518867924528
Precision: 0.7473958333333333
Recall: 0.7439626910145527
F1-Score: 0.7446936625018816
Confusion Matrix:
[[552 245]
 [184 715]]

Results for Twitter_twhin-bert-base with 1D-CNN:
/home/avik/.local/lib/python3.10/site-packages/torch/nn/modules/conv.py:306: UserWarning: Using padding='same' with even kernel lengths and odd dilation may require a zero-padded copy of the input be created (Triggered internally at ../aten/src/ATen/native/Convolution.cpp:1040.)
  return F.conv1d(input, weight, bias, self.stride,
Accuracy: 0.7718160377358491
Precision: 0.7845358997232325
Recall: 0.7777852988752315
F1-Score: 0.7711859354818468
Confusion Matrix:
[[699 98]
 [289 610]]

Automodel:

{'loss': 0.1879, 'grad_norm': 17.707048416137695, 'learning_rate': 1.371069182389937e-05, 'epoch': 0.94}
{'eval_loss': 0.10470244288444519, 'eval_accuracy': 0.970754716981132, 'eval_runtime': 577.0957, 'eval_samples_per_second': 1.837, 'eval_steps_per_second': 0.116, 'epoch': 1.0}
{'loss': 0.063, 'grad_norm': 22.091583251953125, 'learning_rate': 7.421383647798742e-06, 'epoch': 1.89}
{'eval_loss': 0.11748717725276947, 'eval_accuracy': 0.9745283018867924, 'eval_runtime': 575.5433, 'eval_samples_per_second': 1.842, 'eval_steps_per_second': 0.116, 'epoch': 2.0}
Drive link:
https://drive.google.com/drive/folders/1S8VZiejAkKV0itsRbJ7xnc9184OIefvq?usp=sharing