```
D:\DeepFake\pythonProject1\.venv\Scripts\python.exe D:\DeepFake\pythonProject1\Main\main.py
2025-09-18 10:14:25.230033: I tensorflow/core/util/port.cc:153] oneDNN custom operations are on. You may see slightly different numerical results due to floating-point round-off errors from different computation orders. To turn them off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.
2025-09-18 10:14:29.474258: I tensorflow/core/util/port.cc:153] oneDNN custom operations are on. You may see slightly different numerical results due to floating-point round-off errors from different computation orders. To turn them off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.
Using TensorFlow 2.19.0
Config: {
  "model_name": "resnet50",
  "data_dir": "D:/DeepFake/pythonProject1/Frames/FF/FF 224",
  "epochs": 20,
  "batch_size": 32,
  "seed": 42,
  "base_trainable_at": null,
  "warmup_epochs": 3,
  "learning_rate": 0.001,
  "fine_tune_lr": 0.0001,
  "use_class_weights": false,
  "mixed_precision": false,
  "output_dir": "D:/DeepFake/pythonProject1/Main/FF/resnet50"
}
Found 60796 images belonging to 2 classes.
Found 13032 images belonging to 2 classes.
Found 13030 images belonging to 2 classes.
2025-09-18 10:14:44.153904: I tensorflow/core/platform/cpu_feature_guard.cc:210] This TensorFlow binary is optimized to use available CPU instructions in performance-critical operations.
To enable the following instructions: SSE3 SSE4.1 SSE4.2 AVX AVX2 AVX_VNNI FMA, in other operations, rebuild TensorFlow with the appropriate compiler
```

```
23 flags.
24 D:\DeepFake\pythonProject1\.venv\Lib\site-packages\
   keras\src\trainers\data_adapters\py_dataset_adapter.
   py:121: UserWarning: Your `PyDataset` class should
   call `super().__init__(**kwargs)` in its constructor
   . `**kwargs` can include `workers`, `
   use_multiprocessing`, `max_queue_size`. Do not pass
   these arguments to `fit()`, as they will be ignored.
25   self._warn_if_super_not_called()
26 Epoch 1/3
27 1900/1900 ━━━━━━━━━━━━━━━━━━━━ 0s 1s/step - accuracy
   : 0.8609 - loss: 0.4406
28 Epoch 1: val_accuracy improved from -inf to 0.87393,
   saving model to D:/DeepFake/pythonProject1/Main/FF/
   resnet50\best_warmup.keras
29 1900/1900 ━━━━━━━━━━━━━━━━━━━━ 2846s 1s/step -
   accuracy: 0.8609 - loss: 0.4406 - val_accuracy: 0.
   8739 - val_loss: 0.3780 - learning_rate: 0.0010
30 Epoch 2/3
31 1900/1900 ━━━━━━━━━━━━━━━━━━━━ 0s 1s/step - accuracy
   : 0.8673 - loss: 0.4080
32 Epoch 2: val_accuracy did not improve from 0.87393
33 1900/1900 ━━━━━━━━━━━━━━━━━━━━ 3090s 2s/step -
   accuracy: 0.8673 - loss: 0.4080 - val_accuracy: 0.
   8606 - val_loss: 0.3993 - learning_rate: 0.0010
34 Epoch 3/3
35 1900/1900 ━━━━━━━━━━━━━━━━━━━━ 0s 1s/step - accuracy
   : 0.8685 - loss: 0.4057
36 Epoch 3: val_accuracy did not improve from 0.87393
37 1900/1900 ━━━━━━━━━━━━━━━━━━━━ 2971s 2s/step -
   accuracy: 0.8685 - loss: 0.4057 - val_accuracy: 0.
   7443 - val_loss: 0.5550 - learning_rate: 0.0010
38 Saved final model to: D:/DeepFake/pythonProject1/Main
   /FF/resnet50\resnet50.keras
39 Evaluating on test set...
40 408/408 ━━━━━━━━━━━━━━━━━━━━ 486s 1s/step - accuracy
   : 0.9870 - loss: 0.1590
41 Test accuracy: 0.8752 | Test loss: 0.3789
42 408/408 ━━━━━━━━━━━━━━━━━━━━ 478s 1s/step
43
44 Classification Report:
```

```
45
46                precision    recall  f1-score   support
47
48             df       0.88      0.99      0.93     11428
49           real       0.43      0.05      0.09      1602
50
51       accuracy                           0.88     13030
52      macro avg       0.66      0.52      0.51     13030
53  weighted avg       0.83      0.88      0.83     13030
54
55  Confusion Matrix:
56   [[11326   102]
57   [ 1524    78]]
58
59  Process finished with exit code 0
60
```