PS S:\Temp\Eye\_Disease\_Detection> python .\model\_training.py

2025-03-01 16:37:46.580471: 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`.

2025-03-01 16:37:48.506734: 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`.

2025-03-01 16:37:56,417 - INFO - Initializing data generators...

Found 3376 images belonging to 4 classes.

Found 841 images belonging to 4 classes.

2025-03-01 16:37:56,589 - INFO - Loading VGG19 model...

2025-03-01 16:37:56.632305: 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: AVX2 FMA, in other operations, rebuild TensorFlow with the appropriate compiler flags.

Downloading data from https://storage.googleapis.com/tensorflow/keras-applications/vgg19/vgg19\_weights\_tf\_dim\_ordering\_tf\_kernels\_notop.h580134624/80134624 ━━━━━━━━━━━━━━━━━━━━ 46s 1us/step

2025-03-01 16:38:44,015 - INFO - Building custom model on top of VGG19...

2025-03-01 16:38:44,066 - INFO - Starting model training...

C:\Users\SANDEEP\_PC\AppData\Local\Programs\Python\Python312\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.

self.\_warn\_if\_super\_not\_called()

Epoch 1/10

106/106 ━━━━━━━━━━━━━━━━━━━━ 1714s 16s/step - accuracy: 0.4468 - loss: 1.9169 - val\_accuracy: 0.5375 - val\_loss: 0.8840

Epoch 2/10

106/106 ━━━━━━━━━━━━━━━━━━━━ 1697s 16s/step - accuracy: 0.6350 - loss: 0.8453 - val\_accuracy: 0.6243 - val\_loss: 0.7400

Epoch 3/10

106/106 ━━━━━━━━━━━━━━━━━━━━ 1695s 16s/step - accuracy: 0.6918 - loss: 0.7284 - val\_accuracy: 0.6980 - val\_loss: 0.7122

Epoch 4/10

106/106 ━━━━━━━━━━━━━━━━━━━━ 2132s 20s/step - accuracy: 0.6940 - loss: 0.7057 - val\_accuracy: 0.6873 - val\_loss: 0.6590

Epoch 5/10

106/106 ━━━━━━━━━━━━━━━━━━━━ 1775s 16s/step - accuracy: 0.7219 - loss: 0.6646 - val\_accuracy: 0.7432 - val\_loss: 0.6389

Epoch 6/10

106/106 ━━━━━━━━━━━━━━━━━━━━ 1652s 16s/step - accuracy: 0.7403 - loss: 0.6372 - val\_accuracy: 0.7943 - val\_loss: 0.5630

Epoch 7/10

106/106 ━━━━━━━━━━━━━━━━━━━━ 1715s 16s/step - accuracy: 0.7208 - loss: 0.6633 - val\_accuracy: 0.7681 - val\_loss: 0.6118

Epoch 8/10

106/106 ━━━━━━━━━━━━━━━━━━━━ 1682s 16s/step - accuracy: 0.7600 - loss: 0.6001 - val\_accuracy: 0.7039 - val\_loss: 0.6619

Epoch 9/10

106/106 ━━━━━━━━━━━━━━━━━━━━ 1666s 16s/step - accuracy: 0.7491 - loss: 0.5976 - val\_accuracy: 0.6088 - val\_loss: 0.7133

Epoch 10/10

106/106 ━━━━━━━━━━━━━━━━━━━━ 1741s 16s/step - accuracy: 0.7504 - loss: 0.5719 - val\_accuracy: 0.7277 - val\_loss: 0.6058

2025-03-01 21:29:54,628 - INFO - Evaluating model...

27/27 ━━━━━━━━━━━━━━━━━━━━ 327s 12s/step

precision recall f1-score support

normal 0.21 0.20 0.20 207

cataract 0.26 0.26 0.26 219

diabetic\_retinopathy 0.26 0.05 0.09 201

glaucoma 0.24 0.43 0.31 214

accuracy 0.24 841

macro avg 0.24 0.24 0.22 841

weighted avg 0.24 0.24 0.22 841

2025-03-01 21:35:23,391 - INFO - Model evaluation complete.

2025-03-01 21:35:23,413 - WARNING - You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save\_model(model)`. This file format is considered legacy. We recommend using instead the native Keras format, e.g. `model.save('my\_model.keras')` or `keras.saving.save\_model(model, 'my\_model.keras')`.

2025-03-01 21:35:24,282 - INFO - Model saved successfully!