C:\Users\user\AppData\Local\Programs\Python\Python310\python.exe C:/Users/user/Documents/GitHub/IPUML/main.py

Found 732 images belonging to 4 classes.

Found 181 images belonging to 4 classes.

Found 231 images belonging to 4 classes.

Model: "sequential"

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Layer (type) Output Shape Param #

=================================================================

NASNet (Functional) (None, 11, 11, 4032) 84916818

dropout (Dropout) (None, 11, 11, 4032) 0

flatten (Flatten) (None, 487872) 0

batch\_normalization (BatchN (None, 487872) 1951488

ormalization)

dense (Dense) (None, 32) 15611936

batch\_normalization\_1 (Batc (None, 32) 128

hNormalization)

activation\_260 (Activation) (None, 32) 0

dropout\_1 (Dropout) (None, 32) 0

dense\_1 (Dense) (None, 32) 1056

batch\_normalization\_2 (Batc (None, 32) 128

hNormalization)

activation\_261 (Activation) (None, 32) 0

dropout\_2 (Dropout) (None, 32) 0

dense\_2 (Dense) (None, 32) 1056

batch\_normalization\_3 (Batc (None, 32) 128

hNormalization)

activation\_262 (Activation) (None, 32) 0

dense\_3 (Dense) (None, 4) 132

=================================================================

Total params: 102,482,870

Trainable params: 16,590,116

Non-trainable params: 85,892,754

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Epoch 1/5

12/12 [==============================] - 871s 72s/step - loss: 1.4310 - accuracy: 0.7527 - precision: 0.5213 - recall: 0.1339 - auc: 0.5987 - f1\_score: 0.2244 - val\_loss: 2.6691 - val\_accuracy: 0.7362 - val\_precision: 0.4716 - val\_recall: 0.4586 - val\_auc: 0.7435 - val\_f1\_score: 0.4677 - lr: 0.0010

Epoch 2/5

12/12 [==============================] - 838s 71s/step - loss: 1.2835 - accuracy: 0.7702 - precision: 0.6439 - recall: 0.1803 - auc: 0.6730 - f1\_score: 0.2876 - val\_loss: 1.6311 - val\_accuracy: 0.7638 - val\_precision: 0.5325 - val\_recall: 0.4530 - val\_auc: 0.7655 - val\_f1\_score: 0.4888 - lr: 0.0010

Epoch 3/5

12/12 [==============================] - 837s 71s/step - loss: 1.1739 - accuracy: 0.7906 - precision: 0.7793 - recall: 0.2268 - auc: 0.7325 - f1\_score: 0.3472 - val\_loss: 1.3120 - val\_accuracy: 0.7845 - val\_precision: 0.5926 - val\_recall: 0.4420 - val\_auc: 0.7798 - val\_f1\_score: 0.5028 - lr: 0.0010

Epoch 4/5

12/12 [==============================] - 836s 71s/step - loss: 1.0285 - accuracy: 0.8135 - precision: 0.8661 - recall: 0.3005 - auc: 0.8061 - f1\_score: 0.4499 - val\_loss: 1.1584 - val\_accuracy: 0.7983 - val\_precision: 0.6400 - val\_recall: 0.4420 - val\_auc: 0.7982 - val\_f1\_score: 0.5239 - lr: 0.0010

Epoch 5/5

12/12 [==============================] - 986s 83s/step - loss: 0.9675 - accuracy: 0.8176 - precision: 0.8462 - recall: 0.3306 - auc: 0.8472 - f1\_score: 0.4783 - val\_loss: 1.0298 - val\_accuracy: 0.8039 - val\_precision: 0.6726 - val\_recall: 0.4199 - val\_auc: 0.8218 - val\_f1\_score: 0.5185 - lr: 0.0010

Process finished with exit code 0