

Final Training of Model 4 (Disease Detection)

Augmenting classes: 100%|██████████| 12/12 [00:00<00:00,11066.77it/s]

Found 39804 files belonging to [12 classes](#).

Using 33834 files for training.

Found 39804 files belonging to [12 classes](#).

Using 5970 files for validation.

Found 39804 files belonging to [12 classes](#).

Using 3980 files for validation.

Epoch 1/100

1058/1058 ————— 506s 359ms/step -
accuracy: 0.5194 - auc: 0.9051 - loss: 1.9090 - precision: 0.7012 - recall:
0.2968 - top3_accuracy: 0.8263 - top5_accuracy: 0.9127 - val_accuracy:
0.7819 - val_auc: 0.9843 - val_loss: 1.3368 - val_precision: 0.8755 - val_recall:
0.6670 - val_top3_accuracy: 0.9755 - val_top5_accuracy: 0.9918 -
learning_rate: 1.0000e-04

Epoch 2/100

1058/1058 ————— 307s 288ms/step -
accuracy: 0.7192 - auc: 0.9710 - loss: 1.4781 - precision: 0.8302 - recall:
0.5716 - top3_accuracy: 0.9523 - top5_accuracy: 0.9827 - val_accuracy:
0.8137 - val_auc: 0.9879 - val_loss: 1.2704 - val_precision: 0.8839 - val_recall:
0.7189 - val_top3_accuracy: 0.9811 - val_top5_accuracy: 0.9941 -
learning_rate: 1.0000e-04

Epoch 3/100

1058/1058 ————— 302s 283ms/step -
accuracy: 0.7567 - auc: 0.9783 - loss: 1.3919 - precision: 0.8519 - recall:
0.6251 - top3_accuracy: 0.9632 - top5_accuracy: 0.9884 - val_accuracy:
0.8365 - val_auc: 0.9904 - val_loss: 1.2195 - val_precision: 0.8989 - val_recall:
0.7519 - val_top3_accuracy: 0.9843 - val_top5_accuracy: 0.9951 -
learning_rate: 1.0000e-04

Epoch 4/100

1058/1058 ————— 304s 283ms/step -
accuracy: 0.7805 - auc: 0.9824 - loss: 1.3341 - precision: 0.8702 - recall:

0.6587 - top3_accuracy: 0.9705 - top5_accuracy: 0.9912 - val_accuracy:
0.8494 - val_auc: 0.9915 - val_loss: 1.1913 - val_precision: 0.9086 - val_recall:
0.7722 - val_top3_accuracy: 0.9836 - val_top5_accuracy: 0.9963 -
learning_rate: 1.0000e-04

Epoch 5/100

1058/1058 ————— 304s 285ms/step -
accuracy: 0.7889 - auc: 0.9832 - loss: 1.3106 - precision: 0.8744 - recall:
0.6749 - top3_accuracy: 0.9702 - top5_accuracy: 0.9910 - val_accuracy:
0.8514 - val_auc: 0.9920 - val_loss: 1.1727 - val_precision: 0.9081 - val_recall:
0.7782 - val_top3_accuracy: 0.9868 - val_top5_accuracy: 0.9963 -
learning_rate: 1.0000e-04

Epoch 6/100

1058/1058 ————— 293s 274ms/step -
accuracy: 0.8063 - auc: 0.9859 - loss: 1.2717 - precision: 0.8861 - recall:
0.6984 - top3_accuracy: 0.9756 - top5_accuracy: 0.9922 - val_accuracy:
0.8670 - val_auc: 0.9933 - val_loss: 1.1410 - val_precision: 0.9185 - val_recall:
0.8007 - val_top3_accuracy: 0.9879 - val_top5_accuracy: 0.9973 -
learning_rate: 1.0000e-04

Epoch 7/100

1058/1058 ————— 308s 288ms/step -
accuracy: 0.8165 - auc: 0.9869 - loss: 1.2460 - precision: 0.8937 - recall:
0.7144 - top3_accuracy: 0.9761 - top5_accuracy: 0.9923 - val_accuracy:
0.8621 - val_auc: 0.9933 - val_loss: 1.1328 - val_precision: 0.9119 - val_recall:
0.7993 - val_top3_accuracy: 0.9883 - val_top5_accuracy: 0.9963 -
learning_rate: 1.0000e-04

Epoch 8/100

1058/1058 ————— 306s 288ms/step -
accuracy: 0.8187 - auc: 0.9873 - loss: 1.2292 - precision: 0.8930 - recall:
0.7163 - top3_accuracy: 0.9782 - top5_accuracy: 0.9931 - val_accuracy:
0.8682 - val_auc: 0.9937 - val_loss: 1.1166 - val_precision: 0.9193 - val_recall:
0.8037 - val_top3_accuracy: 0.9881 - val_top5_accuracy: 0.9968 -
learning_rate: 1.0000e-04

Epoch 9/100

1058/1058 ————— 294s 274ms/step -
accuracy: 0.8258 - auc: 0.9883 - loss: 1.2091 - precision: 0.8979 - recall:

0.7289 - top3_accuracy: 0.9786 - top5_accuracy: 0.9937 - val_accuracy:
0.8811 - val_auc: 0.9946 - val_loss: 1.0869 - val_precision: 0.9303 - val_recall:
0.8300 - val_top3_accuracy: 0.9894 - val_top5_accuracy: 0.9970 -
learning_rate: 1.0000e-04

Epoch 10/100

1058/1058 ————— 295s 277ms/step -
accuracy: 0.8310 - auc: 0.9892 - loss: 1.1885 - precision: 0.9018 - recall:
0.7383 - top3_accuracy: 0.9804 - top5_accuracy: 0.9947 - val_accuracy:
0.8792 - val_auc: 0.9944 - val_loss: 1.0855 - val_precision: 0.9228 - val_recall:
0.8265 - val_top3_accuracy: 0.9883 - val_top5_accuracy: 0.9972 -
learning_rate: 1.0000e-04

Epoch 11/100

1058/1058 ————— 304s 284ms/step -
accuracy: 0.8373 - auc: 0.9899 - loss: 1.1717 - precision: 0.9052 - recall:
0.7492 - top3_accuracy: 0.9803 - top5_accuracy: 0.9939 - val_accuracy:
0.8843 - val_auc: 0.9947 - val_loss: 1.0754 - val_precision: 0.9231 - val_recall:
0.8362 - val_top3_accuracy: 0.9898 - val_top5_accuracy: 0.9975 -
learning_rate: 1.0000e-04

Epoch 12/100

1058/1058 ————— 300s 282ms/step -
accuracy: 0.8457 - auc: 0.9904 - loss: 1.1520 - precision: 0.9098 - recall:
0.7559 - top3_accuracy: 0.9835 - top5_accuracy: 0.9948 - val_accuracy:
0.8884 - val_auc: 0.9948 - val_loss: 1.0589 - val_precision: 0.9292 - val_recall:
0.8335 - val_top3_accuracy: 0.9894 - val_top5_accuracy: 0.9972 -
learning_rate: 1.0000e-04

Epoch 13/100

1058/1058 ————— 302s 284ms/step -
accuracy: 0.8448 - auc: 0.9907 - loss: 1.1414 - precision: 0.9122 - recall:
0.7623 - top3_accuracy: 0.9817 - top5_accuracy: 0.9942 - val_accuracy:
0.8881 - val_auc: 0.9950 - val_loss: 1.0510 - val_precision: 0.9287 - val_recall:
0.8357 - val_top3_accuracy: 0.9891 - val_top5_accuracy: 0.9977 -
learning_rate: 1.0000e-04

Epoch 14/100

1058/1058 ————— 298s 277ms/step -
accuracy: 0.8550 - auc: 0.9914 - loss: 1.1223 - precision: 0.9147 - recall:

0.7704 - top3_accuracy: 0.9817 - top5_accuracy: 0.9948 - val_accuracy:
0.8893 - val_auc: 0.9954 - val_loss: 1.0383 - val_precision: 0.9249 - val_recall:
0.8442 - val_top3_accuracy: 0.9918 - val_top5_accuracy: 0.9978 -
learning_rate: 1.0000e-04

Epoch 15/100

1058/1058 ————— 309s 289ms/step -
accuracy: 0.8521 - auc: 0.9913 - loss: 1.1160 - precision: 0.9125 - recall:
0.7721 - top3_accuracy: 0.9850 - top5_accuracy: 0.9955 - val_accuracy:
0.8943 - val_auc: 0.9958 - val_loss: 1.0203 - val_precision: 0.9325 - val_recall:
0.8494 - val_top3_accuracy: 0.9926 - val_top5_accuracy: 0.9980 -
learning_rate: 1.0000e-04

Epoch 16/100

1058/1058 ————— 289s 271ms/step -
accuracy: 0.8575 - auc: 0.9921 - loss: 1.0985 - precision: 0.9163 - recall:
0.7789 - top3_accuracy: 0.9850 - top5_accuracy: 0.9963 - val_accuracy:
0.8915 - val_auc: 0.9956 - val_loss: 1.0209 - val_precision: 0.9283 - val_recall:
0.8503 - val_top3_accuracy: 0.9898 - val_top5_accuracy: 0.9980 -
learning_rate: 1.0000e-04

Epoch 17/100

1058/1058 ————— 295s 275ms/step -
accuracy: 0.8627 - auc: 0.9922 - loss: 1.0875 - precision: 0.9164 - recall:
0.7839 - top3_accuracy: 0.9852 - top5_accuracy: 0.9963 - val_accuracy:
0.8938 - val_auc: 0.9958 - val_loss: 1.0091 - val_precision: 0.9299 - val_recall:
0.8489 - val_top3_accuracy: 0.9911 - val_top5_accuracy: 0.9980 -
learning_rate: 1.0000e-04

Epoch 18/100

1058/1058 ————— 300s 279ms/step -
accuracy: 0.8623 - auc: 0.9925 - loss: 1.0783 - precision: 0.9188 - recall:
0.7873 - top3_accuracy: 0.9849 - top5_accuracy: 0.9966 - val_accuracy:
0.8963 - val_auc: 0.9959 - val_loss: 1.0028 - val_precision: 0.9286 - val_recall:
0.8566 - val_top3_accuracy: 0.9908 - val_top5_accuracy: 0.9977 -
learning_rate: 1.0000e-04

Epoch 19/100

1058/1058 ————— 299s 279ms/step -
accuracy: 0.8676 - auc: 0.9924 - loss: 1.0709 - precision: 0.9230 - recall:

0.7926 - top3_accuracy: 0.9840 - top5_accuracy: 0.9968 - val_accuracy:
0.8982 - val_auc: 0.9961 - val_loss: 0.9938 - val_precision: 0.9315 - val_recall:
0.8590 - val_top3_accuracy: 0.9911 - val_top5_accuracy: 0.9982 -
learning_rate: 1.0000e-04

Epoch 20/100

1058/1058 ————— 306s 281ms/step -
accuracy: 0.8702 - auc: 0.9928 - loss: 1.0592 - precision: 0.9239 - recall:
0.7959 - top3_accuracy: 0.9851 - top5_accuracy: 0.9962 - val_accuracy:
0.8993 - val_auc: 0.9961 - val_loss: 0.9869 - val_precision: 0.9371 - val_recall:
0.8588 - val_top3_accuracy: 0.9901 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-04

Epoch 21/100

1058/1058 ————— 298s 279ms/step -
accuracy: 0.8710 - auc: 0.9933 - loss: 1.0459 - precision: 0.9236 - recall:
0.8014 - top3_accuracy: 0.9867 - top5_accuracy: 0.9965 - val_accuracy:
0.9015 - val_auc: 0.9962 - val_loss: 0.9792 - val_precision: 0.9344 - val_recall:
0.8593 - val_top3_accuracy: 0.9903 - val_top5_accuracy: 0.9987 -
learning_rate: 1.0000e-04

Epoch 22/100

1058/1058 ————— 308s 285ms/step -
accuracy: 0.8747 - auc: 0.9932 - loss: 1.0420 - precision: 0.9234 - recall:
0.8044 - top3_accuracy: 0.9872 - top5_accuracy: 0.9965 - val_accuracy:
0.9062 - val_auc: 0.9964 - val_loss: 0.9660 - val_precision: 0.9380 - val_recall:
0.8690 - val_top3_accuracy: 0.9921 - val_top5_accuracy: 0.9978 -
learning_rate: 1.0000e-04

Epoch 23/100

1058/1058 ————— 296s 277ms/step -
accuracy: 0.8694 - auc: 0.9930 - loss: 1.0387 - precision: 0.9231 - recall:
0.7987 - top3_accuracy: 0.9870 - top5_accuracy: 0.9963 - val_accuracy:
0.9047 - val_auc: 0.9964 - val_loss: 0.9647 - val_precision: 0.9365 - val_recall:
0.8620 - val_top3_accuracy: 0.9911 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-04

Epoch 24/100

1058/1058 ————— 309s 286ms/step -
accuracy: 0.8762 - auc: 0.9935 - loss: 1.0250 - precision: 0.9271 - recall:

0.8048 - top3_accuracy: 0.9884 - top5_accuracy: 0.9966 - val_accuracy:
0.9054 - val_auc: 0.9965 - val_loss: 0.9586 - val_precision: 0.9385 - val_recall:
0.8683 - val_top3_accuracy: 0.9915 - val_top5_accuracy: 0.9977 -
learning_rate: 1.0000e-04

Epoch 25/100

1058/1058 ————— 305s 286ms/step -
accuracy: 0.8777 - auc: 0.9935 - loss: 1.0204 - precision: 0.9253 - recall:
0.8114 - top3_accuracy: 0.9875 - top5_accuracy: 0.9972 - val_accuracy:
0.9059 - val_auc: 0.9967 - val_loss: 0.9491 - val_precision: 0.9385 - val_recall:
0.8714 - val_top3_accuracy: 0.9923 - val_top5_accuracy: 0.9980 -
learning_rate: 1.0000e-04

Epoch 26/100

1058/1058 ————— 302s 284ms/step -
accuracy: 0.8792 - auc: 0.9939 - loss: 1.0106 - precision: 0.9293 - recall:
0.8126 - top3_accuracy: 0.9883 - top5_accuracy: 0.9974 - val_accuracy:
0.9107 - val_auc: 0.9969 - val_loss: 0.9390 - val_precision: 0.9391 - val_recall:
0.8752 - val_top3_accuracy: 0.9925 - val_top5_accuracy: 0.9980 -
learning_rate: 1.0000e-04

Epoch 27/100

1058/1058 ————— 294s 275ms/step -
accuracy: 0.8818 - auc: 0.9940 - loss: 1.0047 - precision: 0.9279 - recall:
0.8150 - top3_accuracy: 0.9896 - top5_accuracy: 0.9971 - val_accuracy:
0.9042 - val_auc: 0.9963 - val_loss: 0.9509 - val_precision: 0.9364 - val_recall:
0.8735 - val_top3_accuracy: 0.9911 - val_top5_accuracy: 0.9982 -
learning_rate: 1.0000e-04

Epoch 28/100

1058/1058 ————— 292s 274ms/step -
accuracy: 0.8761 - auc: 0.9939 - loss: 1.0034 - precision: 0.9278 - recall:
0.8142 - top3_accuracy: 0.9878 - top5_accuracy: 0.9968 - val_accuracy:
0.9085 - val_auc: 0.9966 - val_loss: 0.9380 - val_precision: 0.9356 - val_recall:
0.8762 - val_top3_accuracy: 0.9931 - val_top5_accuracy: 0.9980 -
learning_rate: 1.0000e-04

Epoch 29/100

1058/1058 ————— 295s 277ms/step -
accuracy: 0.8824 - auc: 0.9940 - loss: 0.9944 - precision: 0.9309 - recall:

0.8171 - top3_accuracy: 0.9887 - top5_accuracy: 0.9964 - val_accuracy:
0.9050 - val_auc: 0.9965 - val_loss: 0.9354 - val_precision: 0.9319 - val_recall:
0.8784 - val_top3_accuracy: 0.9916 - val_top5_accuracy: 0.9977 -
learning_rate: 1.0000e-04

Epoch 30/100

1058/1058 ————— 301s 280ms/step -
accuracy: 0.8847 - auc: 0.9942 - loss: 0.9878 - precision: 0.9306 - recall:
0.8213 - top3_accuracy: 0.9893 - top5_accuracy: 0.9968 - val_accuracy:
0.9136 - val_auc: 0.9969 - val_loss: 0.9203 - val_precision: 0.9425 - val_recall:
0.8759 - val_top3_accuracy: 0.9925 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 31/100

1058/1058 ————— 296s 278ms/step -
accuracy: 0.8847 - auc: 0.9946 - loss: 0.9783 - precision: 0.9325 - recall:
0.8200 - top3_accuracy: 0.9891 - top5_accuracy: 0.9969 - val_accuracy:
0.9085 - val_auc: 0.9967 - val_loss: 0.9195 - val_precision: 0.9425 - val_recall:
0.8757 - val_top3_accuracy: 0.9930 - val_top5_accuracy: 0.9982 -
learning_rate: 1.0000e-04

Epoch 32/100

1058/1058 ————— 297s 278ms/step -
accuracy: 0.8849 - auc: 0.9946 - loss: 0.9761 - precision: 0.9296 - recall:
0.8232 - top3_accuracy: 0.9899 - top5_accuracy: 0.9970 - val_accuracy:
0.9176 - val_auc: 0.9969 - val_loss: 0.9114 - val_precision: 0.9477 - val_recall:
0.8859 - val_top3_accuracy: 0.9928 - val_top5_accuracy: 0.9982 -
learning_rate: 1.0000e-04

Epoch 33/100

1058/1058 ————— 297s 277ms/step -
accuracy: 0.8860 - auc: 0.9946 - loss: 0.9698 - precision: 0.9346 - recall:
0.8269 - top3_accuracy: 0.9903 - top5_accuracy: 0.9972 - val_accuracy:
0.9117 - val_auc: 0.9966 - val_loss: 0.9156 - val_precision: 0.9402 - val_recall:
0.8794 - val_top3_accuracy: 0.9921 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 34/100

1058/1058 ————— 303s 282ms/step -
accuracy: 0.8887 - auc: 0.9943 - loss: 0.9673 - precision: 0.9345 - recall:

0.8275 - top3_accuracy: 0.9873 - top5_accuracy: 0.9964 - val_accuracy:
0.9147 - val_auc: 0.9971 - val_loss: 0.9054 - val_precision: 0.9433 - val_recall:
0.8856 - val_top3_accuracy: 0.9925 - val_top5_accuracy: 0.9988 -
learning_rate: 1.0000e-04

Epoch 35/100

1058/1058 ————— 292s 274ms/step -
accuracy: 0.8874 - auc: 0.9945 - loss: 0.9645 - precision: 0.9354 - recall:
0.8288 - top3_accuracy: 0.9896 - top5_accuracy: 0.9973 - val_accuracy:
0.9139 - val_auc: 0.9968 - val_loss: 0.9065 - val_precision: 0.9432 - val_recall:
0.8817 - val_top3_accuracy: 0.9935 - val_top5_accuracy: 0.9982 -
learning_rate: 1.0000e-04

Epoch 36/100

1058/1058 ————— 294s 274ms/step -
accuracy: 0.8870 - auc: 0.9947 - loss: 0.9618 - precision: 0.9313 - recall:
0.8279 - top3_accuracy: 0.9900 - top5_accuracy: 0.9977 - val_accuracy:
0.9164 - val_auc: 0.9971 - val_loss: 0.9007 - val_precision: 0.9432 - val_recall:
0.8819 - val_top3_accuracy: 0.9926 - val_top5_accuracy: 0.9988 -
learning_rate: 1.0000e-04

Epoch 37/100

1058/1058 ————— 291s 274ms/step -
accuracy: 0.8877 - auc: 0.9948 - loss: 0.9575 - precision: 0.9315 - recall:
0.8276 - top3_accuracy: 0.9896 - top5_accuracy: 0.9980 - val_accuracy:
0.9122 - val_auc: 0.9970 - val_loss: 0.9022 - val_precision: 0.9413 - val_recall:
0.8829 - val_top3_accuracy: 0.9915 - val_top5_accuracy: 0.9978 -
learning_rate: 1.0000e-04

Epoch 38/100

1058/1058 ————— 301s 282ms/step -
accuracy: 0.8926 - auc: 0.9949 - loss: 0.9506 - precision: 0.9332 - recall:
0.8341 - top3_accuracy: 0.9912 - top5_accuracy: 0.9978 - val_accuracy:
0.9139 - val_auc: 0.9971 - val_loss: 0.8961 - val_precision: 0.9439 - val_recall:
0.8826 - val_top3_accuracy: 0.9925 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 39/100

1058/1058 ————— 292s 272ms/step -
accuracy: 0.8906 - auc: 0.9951 - loss: 0.9448 - precision: 0.9337 - recall:

0.8331 - top3_accuracy: 0.9909 - top5_accuracy: 0.9982 - val_accuracy:
0.9129 - val_auc: 0.9969 - val_loss: 0.8926 - val_precision: 0.9429 - val_recall:
0.8826 - val_top3_accuracy: 0.9925 - val_top5_accuracy: 0.9978 -
learning_rate: 1.0000e-04

Epoch 40/100

1058/1058 ————— 293s 275ms/step -
accuracy: 0.8953 - auc: 0.9952 - loss: 0.9369 - precision: 0.9368 - recall:
0.8357 - top3_accuracy: 0.9920 - top5_accuracy: 0.9979 - val_accuracy:
0.9186 - val_auc: 0.9971 - val_loss: 0.8880 - val_precision: 0.9453 - val_recall:
0.8854 - val_top3_accuracy: 0.9930 - val_top5_accuracy: 0.9982 -
learning_rate: 1.0000e-04

Epoch 41/100

1058/1058 ————— 293s 273ms/step -
accuracy: 0.8908 - auc: 0.9950 - loss: 0.9433 - precision: 0.9348 - recall:
0.8309 - top3_accuracy: 0.9899 - top5_accuracy: 0.9969 - val_accuracy:
0.9174 - val_auc: 0.9969 - val_loss: 0.8877 - val_precision: 0.9440 - val_recall:
0.8839 - val_top3_accuracy: 0.9936 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 42/100

1058/1058 ————— 289s 272ms/step -
accuracy: 0.8950 - auc: 0.9951 - loss: 0.9363 - precision: 0.9369 - recall:
0.8366 - top3_accuracy: 0.9915 - top5_accuracy: 0.9974 - val_accuracy:
0.9117 - val_auc: 0.9966 - val_loss: 0.8930 - val_precision: 0.9414 - val_recall:
0.8822 - val_top3_accuracy: 0.9925 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-04

Epoch 43/100

1058/1058 ————— 302s 283ms/step -
accuracy: 0.8944 - auc: 0.9953 - loss: 0.9321 - precision: 0.9365 - recall:
0.8394 - top3_accuracy: 0.9912 - top5_accuracy: 0.9973 - val_accuracy:
0.9243 - val_auc: 0.9974 - val_loss: 0.8744 - val_precision: 0.9489 - val_recall:
0.8925 - val_top3_accuracy: 0.9920 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 44/100

1058/1058 ————— 292s 273ms/step -
accuracy: 0.8947 - auc: 0.9953 - loss: 0.9277 - precision: 0.9357 - recall:

0.8405 - top3_accuracy: 0.9909 - top5_accuracy: 0.9978 - val_accuracy:
0.9151 - val_auc: 0.9971 - val_loss: 0.8801 - val_precision: 0.9450 - val_recall:
0.8836 - val_top3_accuracy: 0.9931 - val_top5_accuracy: 0.9987 -
learning_rate: 1.0000e-04

Epoch 45/100

1058/1058 ————— 294s 275ms/step -
accuracy: 0.8980 - auc: 0.9955 - loss: 0.9212 - precision: 0.9398 - recall:
0.8469 - top3_accuracy: 0.9916 - top5_accuracy: 0.9978 - val_accuracy:
0.9183 - val_auc: 0.9972 - val_loss: 0.8724 - val_precision: 0.9443 - val_recall:
0.8883 - val_top3_accuracy: 0.9933 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 46/100

1058/1058 ————— 292s 272ms/step -
accuracy: 0.8989 - auc: 0.9955 - loss: 0.9210 - precision: 0.9379 - recall:
0.8444 - top3_accuracy: 0.9917 - top5_accuracy: 0.9977 - val_accuracy:
0.9218 - val_auc: 0.9973 - val_loss: 0.8687 - val_precision: 0.9490 - val_recall:
0.8911 - val_top3_accuracy: 0.9933 - val_top5_accuracy: 0.9987 -
learning_rate: 1.0000e-04

Epoch 47/100

1058/1058 ————— 291s 271ms/step -
accuracy: 0.8984 - auc: 0.9955 - loss: 0.9175 - precision: 0.9365 - recall:
0.8442 - top3_accuracy: 0.9914 - top5_accuracy: 0.9976 - val_accuracy:
0.9211 - val_auc: 0.9973 - val_loss: 0.8653 - val_precision: 0.9495 - val_recall:
0.8946 - val_top3_accuracy: 0.9935 - val_top5_accuracy: 0.9982 -
learning_rate: 1.0000e-04

Epoch 48/100

1058/1058 ————— 295s 275ms/step -
accuracy: 0.8977 - auc: 0.9953 - loss: 0.9183 - precision: 0.9382 - recall:
0.8459 - top3_accuracy: 0.9910 - top5_accuracy: 0.9971 - val_accuracy:
0.9162 - val_auc: 0.9971 - val_loss: 0.8712 - val_precision: 0.9421 - val_recall:
0.8881 - val_top3_accuracy: 0.9933 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-04

Epoch 49/100

1058/1058 ————— 295s 277ms/step -
accuracy: 0.9008 - auc: 0.9955 - loss: 0.9101 - precision: 0.9401 - recall:

0.8491 - top3_accuracy: 0.9916 - top5_accuracy: 0.9973 - val_accuracy:
0.9231 - val_auc: 0.9971 - val_loss: 0.8625 - val_precision: 0.9502 - val_recall:
0.8940 - val_top3_accuracy: 0.9928 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 50/100

1058/1058 ————— 290s 271ms/step -
accuracy: 0.9014 - auc: 0.9956 - loss: 0.9074 - precision: 0.9420 - recall:
0.8509 - top3_accuracy: 0.9907 - top5_accuracy: 0.9976 - val_accuracy:
0.9235 - val_auc: 0.9973 - val_loss: 0.8575 - val_precision: 0.9485 - val_recall:
0.8970 - val_top3_accuracy: 0.9936 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-04

Epoch 51/100

1058/1058 ————— 290s 272ms/step -
accuracy: 0.9015 - auc: 0.9958 - loss: 0.9046 - precision: 0.9416 - recall:
0.8525 - top3_accuracy: 0.9916 - top5_accuracy: 0.9975 - val_accuracy:
0.9224 - val_auc: 0.9974 - val_loss: 0.8588 - val_precision: 0.9489 - val_recall:
0.8935 - val_top3_accuracy: 0.9936 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 52/100

1058/1058 ————— 293s 273ms/step -
accuracy: 0.8984 - auc: 0.9956 - loss: 0.9088 - precision: 0.9370 - recall:
0.8508 - top3_accuracy: 0.9910 - top5_accuracy: 0.9973 - val_accuracy:
0.9157 - val_auc: 0.9971 - val_loss: 0.8639 - val_precision: 0.9432 - val_recall:
0.8879 - val_top3_accuracy: 0.9925 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 53/100

1058/1058 ————— 301s 280ms/step -
accuracy: 0.9017 - auc: 0.9956 - loss: 0.9048 - precision: 0.9388 - recall:
0.8487 - top3_accuracy: 0.9917 - top5_accuracy: 0.9979 - val_accuracy:
0.9270 - val_auc: 0.9976 - val_loss: 0.8468 - val_precision: 0.9513 - val_recall:
0.8963 - val_top3_accuracy: 0.9941 - val_top5_accuracy: 0.9987 -
learning_rate: 1.0000e-04

Epoch 54/100

1058/1058 ————— 296s 272ms/step -
accuracy: 0.9009 - auc: 0.9957 - loss: 0.9023 - precision: 0.9399 - recall:

0.8520 - top3_accuracy: 0.9916 - top5_accuracy: 0.9977 - val_accuracy:
0.9255 - val_auc: 0.9975 - val_loss: 0.8542 - val_precision: 0.9528 - val_recall:
0.8923 - val_top3_accuracy: 0.9928 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-04

Epoch 55/100

1058/1058 ————— 293s 276ms/step -
accuracy: 0.9032 - auc: 0.9959 - loss: 0.8979 - precision: 0.9433 - recall:
0.8554 - top3_accuracy: 0.9917 - top5_accuracy: 0.9976 - val_accuracy:
0.9280 - val_auc: 0.9973 - val_loss: 0.8481 - val_precision: 0.9527 - val_recall:
0.8975 - val_top3_accuracy: 0.9928 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 56/100

1058/1058 ————— 294s 275ms/step -
accuracy: 0.9104 - auc: 0.9962 - loss: 0.8868 - precision: 0.9442 - recall:
0.8605 - top3_accuracy: 0.9926 - top5_accuracy: 0.9983 - val_accuracy:
0.9219 - val_auc: 0.9971 - val_loss: 0.8556 - val_precision: 0.9463 - val_recall:
0.8946 - val_top3_accuracy: 0.9933 - val_top5_accuracy: 0.9975 -
learning_rate: 1.0000e-04

Epoch 57/100

1058/1058 ————— 295s 275ms/step -
accuracy: 0.9037 - auc: 0.9957 - loss: 0.8957 - precision: 0.9395 - recall:
0.8567 - top3_accuracy: 0.9918 - top5_accuracy: 0.9983 - val_accuracy:
0.9251 - val_auc: 0.9975 - val_loss: 0.8463 - val_precision: 0.9503 - val_recall:
0.8972 - val_top3_accuracy: 0.9920 - val_top5_accuracy: 0.9988 -
learning_rate: 1.0000e-04

Epoch 58/100

1058/1058 ————— 293s 275ms/step -
accuracy: 0.9074 - auc: 0.9962 - loss: 0.8895 - precision: 0.9435 - recall:
0.8593 - top3_accuracy: 0.9918 - top5_accuracy: 0.9977 - val_accuracy:
0.9179 - val_auc: 0.9973 - val_loss: 0.8518 - val_precision: 0.9483 - val_recall:
0.8935 - val_top3_accuracy: 0.9940 - val_top5_accuracy: 0.9988 -
learning_rate: 1.0000e-04

Epoch 59/100

1058/1058 ————— 298s 277ms/step -
accuracy: 0.9049 - auc: 0.9959 - loss: 0.8896 - precision: 0.9438 - recall:

0.8579 - top3_accuracy: 0.9921 - top5_accuracy: 0.9978 - val_accuracy:
0.9296 - val_auc: 0.9977 - val_loss: 0.8383 - val_precision: 0.9502 - val_recall:
0.9015 - val_top3_accuracy: 0.9943 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 60/100

1058/1058 ————— 296s 272ms/step -
accuracy: 0.9061 - auc: 0.9961 - loss: 0.8872 - precision: 0.9441 - recall:
0.8578 - top3_accuracy: 0.9923 - top5_accuracy: 0.9978 - val_accuracy:
0.9209 - val_auc: 0.9974 - val_loss: 0.8469 - val_precision: 0.9462 - val_recall:
0.8928 - val_top3_accuracy: 0.9928 - val_top5_accuracy: 0.9982 -
learning_rate: 1.0000e-04

Epoch 61/100

1058/1058 ————— 293s 273ms/step -
accuracy: 0.9049 - auc: 0.9960 - loss: 0.8866 - precision: 0.9420 - recall:
0.8593 - top3_accuracy: 0.9911 - top5_accuracy: 0.9980 - val_accuracy:
0.9258 - val_auc: 0.9974 - val_loss: 0.8417 - val_precision: 0.9510 - val_recall:
0.8968 - val_top3_accuracy: 0.9935 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-04

Epoch 62/100

1058/1058 ————— 294s 276ms/step -
accuracy: 0.9103 - auc: 0.9962 - loss: 0.8809 - precision: 0.9440 - recall:
0.8631 - top3_accuracy: 0.9925 - top5_accuracy: 0.9983 - val_accuracy:
0.9246 - val_auc: 0.9974 - val_loss: 0.8434 - val_precision: 0.9499 - val_recall:
0.8958 - val_top3_accuracy: 0.9936 - val_top5_accuracy: 0.9978 -
learning_rate: 1.0000e-04

Epoch 63/100

1058/1058 ————— 291s 271ms/step -
accuracy: 0.9055 - auc: 0.9963 - loss: 0.8823 - precision: 0.9426 - recall:
0.8598 - top3_accuracy: 0.9923 - top5_accuracy: 0.9982 - val_accuracy:
0.9275 - val_auc: 0.9975 - val_loss: 0.8376 - val_precision: 0.9524 - val_recall:
0.8955 - val_top3_accuracy: 0.9940 - val_top5_accuracy: 0.9987 -
learning_rate: 1.0000e-04

Epoch 64/100

1058/1058 ————— 291s 273ms/step -
accuracy: 0.9066 - auc: 0.9964 - loss: 0.8789 - precision: 0.9443 - recall:

0.8624 - top3_accuracy: 0.9906 - top5_accuracy: 0.9988 - val_accuracy:
0.9288 - val_auc: 0.9974 - val_loss: 0.8344 - val_precision: 0.9521 - val_recall:
0.9047 - val_top3_accuracy: 0.9936 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 65/100

1058/1058 ————— 292s 272ms/step -
accuracy: 0.9039 - auc: 0.9961 - loss: 0.8826 - precision: 0.9427 - recall:
0.8580 - top3_accuracy: 0.9921 - top5_accuracy: 0.9984 - val_accuracy:
0.9223 - val_auc: 0.9972 - val_loss: 0.8447 - val_precision: 0.9490 - val_recall:
0.8970 - val_top3_accuracy: 0.9926 - val_top5_accuracy: 0.9982 -
learning_rate: 1.0000e-04

Epoch 66/100

1058/1058 ————— 293s 275ms/step -
accuracy: 0.9090 - auc: 0.9962 - loss: 0.8775 - precision: 0.9438 - recall:
0.8612 - top3_accuracy: 0.9926 - top5_accuracy: 0.9977 - val_accuracy:
0.9243 - val_auc: 0.9976 - val_loss: 0.8364 - val_precision: 0.9501 - val_recall:
0.8987 - val_top3_accuracy: 0.9940 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-04

Epoch 67/100

1058/1058 ————— 295s 276ms/step -
accuracy: 0.9048 - auc: 0.9961 - loss: 0.8796 - precision: 0.9406 - recall:
0.8596 - top3_accuracy: 0.9924 - top5_accuracy: 0.9983 - val_accuracy:
0.9278 - val_auc: 0.9971 - val_loss: 0.8315 - val_precision: 0.9516 - val_recall:
0.9018 - val_top3_accuracy: 0.9941 - val_top5_accuracy: 0.9982 -
learning_rate: 1.0000e-04

Epoch 68/100

1058/1058 ————— 292s 272ms/step -
accuracy: 0.9071 - auc: 0.9962 - loss: 0.8772 - precision: 0.9438 - recall:
0.8622 - top3_accuracy: 0.9924 - top5_accuracy: 0.9979 - val_accuracy:
0.9266 - val_auc: 0.9975 - val_loss: 0.8308 - val_precision: 0.9518 - val_recall:
0.9003 - val_top3_accuracy: 0.9941 - val_top5_accuracy: 0.9987 -
learning_rate: 1.0000e-04

Epoch 69/100

1058/1058 ————— 293s 273ms/step -
accuracy: 0.9095 - auc: 0.9964 - loss: 0.8717 - precision: 0.9457 - recall:

0.8663 - top3_accuracy: 0.9923 - top5_accuracy: 0.9981 - val_accuracy:
0.9283 - val_auc: 0.9975 - val_loss: 0.8332 - val_precision: 0.9513 - val_recall:
0.8995 - val_top3_accuracy: 0.9940 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-04

Epoch 70/100

1058/1058 ————— 295s 275ms/step -
accuracy: 0.9112 - auc: 0.9963 - loss: 0.8717 - precision: 0.9458 - recall:
0.8637 - top3_accuracy: 0.9929 - top5_accuracy: 0.9976 - val_accuracy:
0.9199 - val_auc: 0.9971 - val_loss: 0.8446 - val_precision: 0.9460 - val_recall:
0.8945 - val_top3_accuracy: 0.9928 - val_top5_accuracy: 0.9978 -
learning_rate: 1.0000e-04

Epoch 71/100

1058/1058 ————— 293s 275ms/step -
accuracy: 0.9099 - auc: 0.9963 - loss: 0.8697 - precision: 0.9435 - recall:
0.8656 - top3_accuracy: 0.9922 - top5_accuracy: 0.9979 - val_accuracy:
0.9206 - val_auc: 0.9970 - val_loss: 0.8411 - val_precision: 0.9471 - val_recall:
0.8963 - val_top3_accuracy: 0.9940 - val_top5_accuracy: 0.9982 -
learning_rate: 1.0000e-04

Epoch 72/100

1058/1058 ————— 293s 276ms/step -
accuracy: 0.9068 - auc: 0.9961 - loss: 0.8774 - precision: 0.9443 - recall:
0.8617 - top3_accuracy: 0.9922 - top5_accuracy: 0.9975 - val_accuracy:
0.9281 - val_auc: 0.9975 - val_loss: 0.8263 - val_precision: 0.9513 - val_recall:
0.9005 - val_top3_accuracy: 0.9941 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-04

Epoch 73/100

1058/1058 ————— 290s 273ms/step -
accuracy: 0.9093 - auc: 0.9964 - loss: 0.8697 - precision: 0.9452 - recall:
0.8644 - top3_accuracy: 0.9924 - top5_accuracy: 0.9983 - val_accuracy:
0.9256 - val_auc: 0.9975 - val_loss: 0.8343 - val_precision: 0.9496 - val_recall:
0.9017 - val_top3_accuracy: 0.9926 - val_top5_accuracy: 0.9978 -
learning_rate: 1.0000e-04

Epoch 74/100

1058/1058 ————— 291s 273ms/step -
accuracy: 0.9123 - auc: 0.9962 - loss: 0.8680 - precision: 0.9447 - recall:

0.8693 - top3_accuracy: 0.9921 - top5_accuracy: 0.9975 - val_accuracy:
0.9296 - val_auc: 0.9974 - val_loss: 0.8250 - val_precision: 0.9551 - val_recall:
0.9042 - val_top3_accuracy: 0.9923 - val_top5_accuracy: 0.9980 -
learning_rate: 1.0000e-04

Epoch 74: early stopping

Restoring model weights from the end of the best epoch: 59.

Epoch 101/120

1058/1058 ————— 1366s 1s/step -
accuracy: 0.9347 - auc: 0.9979 - loss: 0.8240 - precision: 0.9584 - recall:
0.9029 - top3_accuracy: 0.9943 - top5_accuracy: 0.9984 - val_accuracy:
0.9658 - val_auc: 0.9989 - val_loss: 0.7502 - val_precision: 0.9769 - val_recall:
0.9513 - val_top3_accuracy: 0.9965 - val_top5_accuracy: 0.9988 -
learning_rate: 1.0000e-05

Epoch 102/120

1058/1058 ————— 393s 370ms/step -
accuracy: 0.9605 - auc: 0.9990 - loss: 0.7670 - precision: 0.9759 - recall:
0.9386 - top3_accuracy: 0.9975 - top5_accuracy: 0.9994 - val_accuracy:
0.9720 - val_auc: 0.9994 - val_loss: 0.7330 - val_precision: 0.9797 - val_recall:
0.9616 - val_top3_accuracy: 0.9973 - val_top5_accuracy: 0.9990 -
learning_rate: 1.0000e-05

Epoch 103/120

1058/1058 ————— 426s 397ms/step -
accuracy: 0.9726 - auc: 0.9995 - loss: 0.7386 - precision: 0.9845 - recall:
0.9576 - top3_accuracy: 0.9983 - top5_accuracy: 0.9995 - val_accuracy:
0.9760 - val_auc: 0.9996 - val_loss: 0.7220 - val_precision: 0.9836 - val_recall:
0.9673 - val_top3_accuracy: 0.9977 - val_top5_accuracy: 0.9990 -
learning_rate: 1.0000e-05

Epoch 104/120

1058/1058 ————— 379s 357ms/step -
accuracy: 0.9806 - auc: 0.9997 - loss: 0.7201 - precision: 0.9881 - recall:
0.9672 - top3_accuracy: 0.9988 - top5_accuracy: 0.9998 - val_accuracy:
0.9784 - val_auc: 0.9995 - val_loss: 0.7140 - val_precision: 0.9839 - val_recall:
0.9705 - val_top3_accuracy: 0.9972 - val_top5_accuracy: 0.9990 -
learning_rate: 1.0000e-05

Epoch 105/120

1058/1058 ————— 421s 395ms/step -
accuracy: 0.9822 - auc: 0.9998 - loss: 0.7099 - precision: 0.9897 - recall:
0.9716 - top3_accuracy: 0.9994 - top5_accuracy: 0.9998 - val_accuracy:
0.9792 - val_auc: 0.9996 - val_loss: 0.7074 - val_precision: 0.9873 - val_recall:
0.9732 - val_top3_accuracy: 0.9970 - val_top5_accuracy: 0.9990 -
learning_rate: 1.0000e-05

Epoch 106/120

1058/1058 ————— 423s 395ms/step -
accuracy: 0.9875 - auc: 0.9998 - loss: 0.6986 - precision: 0.9933 - recall:
0.9787 - top3_accuracy: 0.9994 - top5_accuracy: 0.9997 - val_accuracy:
0.9811 - val_auc: 0.9997 - val_loss: 0.7012 - val_precision: 0.9878 - val_recall:
0.9739 - val_top3_accuracy: 0.9973 - val_top5_accuracy: 0.9990 -
learning_rate: 1.0000e-05

Epoch 107/120

1058/1058 ————— 420s 393ms/step -
accuracy: 0.9904 - auc: 0.9999 - loss: 0.6892 - precision: 0.9944 - recall:
0.9833 - top3_accuracy: 0.9997 - top5_accuracy: 0.9999 - val_accuracy:
0.9814 - val_auc: 0.9997 - val_loss: 0.6984 - val_precision: 0.9870 - val_recall:
0.9767 - val_top3_accuracy: 0.9977 - val_top5_accuracy: 0.9992 -
learning_rate: 1.0000e-05

Epoch 108/120

1058/1058 ————— 382s 356ms/step -
accuracy: 0.9924 - auc: 0.9999 - loss: 0.6835 - precision: 0.9956 - recall:
0.9859 - top3_accuracy: 0.9996 - top5_accuracy: 0.9998 - val_accuracy:
0.9846 - val_auc: 0.9996 - val_loss: 0.6907 - val_precision: 0.9890 - val_recall:
0.9786 - val_top3_accuracy: 0.9978 - val_top5_accuracy: 0.9993 -
learning_rate: 1.0000e-05

Epoch 109/120

1058/1058 ————— 384s 358ms/step -
accuracy: 0.9930 - auc: 1.0000 - loss: 0.6769 - precision: 0.9963 - recall:
0.9875 - top3_accuracy: 0.9997 - top5_accuracy: 1.0000 - val_accuracy:
0.9841 - val_auc: 0.9996 - val_loss: 0.6879 - val_precision: 0.9878 - val_recall:
0.9787 - val_top3_accuracy: 0.9977 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-05

Epoch 110/120

1058/1058 ————— 386s 360ms/step -
accuracy: 0.9942 - auc: 1.0000 - loss: 0.6716 - precision: 0.9960 - recall:
0.9899 - top3_accuracy: 0.9999 - top5_accuracy: 1.0000 - val_accuracy:
0.9832 - val_auc: 0.9995 - val_loss: 0.6858 - val_precision: 0.9884 - val_recall:
0.9807 - val_top3_accuracy: 0.9973 - val_top5_accuracy: 0.9988 -
learning_rate: 1.0000e-05

Epoch 111/120

1058/1058 ————— 380s 356ms/step -
accuracy: 0.9959 - auc: 1.0000 - loss: 0.6654 - precision: 0.9974 - recall:
0.9917 - top3_accuracy: 0.9999 - top5_accuracy: 1.0000 - val_accuracy:
0.9849 - val_auc: 0.9995 - val_loss: 0.6801 - val_precision: 0.9894 - val_recall:
0.9826 - val_top3_accuracy: 0.9977 - val_top5_accuracy: 0.9988 -
learning_rate: 1.0000e-05

Epoch 112/120

1058/1058 ————— 380s 355ms/step -
accuracy: 0.9950 - auc: 1.0000 - loss: 0.6630 - precision: 0.9973 - recall:
0.9911 - top3_accuracy: 0.9999 - top5_accuracy: 1.0000 - val_accuracy:
0.9858 - val_auc: 0.9993 - val_loss: 0.6777 - val_precision: 0.9907 - val_recall:
0.9822 - val_top3_accuracy: 0.9975 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-05

Epoch 113/120

1058/1058 ————— 382s 358ms/step -
accuracy: 0.9957 - auc: 1.0000 - loss: 0.6586 - precision: 0.9974 - recall:
0.9922 - top3_accuracy: 0.9999 - top5_accuracy: 1.0000 - val_accuracy:
0.9843 - val_auc: 0.9992 - val_loss: 0.6779 - val_precision: 0.9890 - val_recall:
0.9804 - val_top3_accuracy: 0.9970 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-05

Epoch 114/120

1058/1058 ————— 382s 356ms/step -
accuracy: 0.9959 - auc: 0.9999 - loss: 0.6549 - precision: 0.9976 - recall:
0.9927 - top3_accuracy: 0.9998 - top5_accuracy: 0.9999 - val_accuracy:
0.9843 - val_auc: 0.9995 - val_loss: 0.6744 - val_precision: 0.9883 - val_recall:
0.9804 - val_top3_accuracy: 0.9972 - val_top5_accuracy: 0.9992 -
learning_rate: 1.0000e-05

Epoch 115/120

1058/1058 ————— 381s 356ms/step -
accuracy: 0.9979 - auc: 1.0000 - loss: 0.6486 - precision: 0.9985 - recall:
0.9957 - top3_accuracy: 0.9999 - top5_accuracy: 1.0000 - val_accuracy:
0.9844 - val_auc: 0.9991 - val_loss: 0.6711 - val_precision: 0.9895 - val_recall:
0.9812 - val_top3_accuracy: 0.9970 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-05

Epoch 116/120

1058/1058 ————— 383s 357ms/step -
accuracy: 0.9975 - auc: 1.0000 - loss: 0.6454 - precision: 0.9984 - recall:
0.9955 - top3_accuracy: 0.9999 - top5_accuracy: 1.0000 - val_accuracy:
0.9843 - val_auc: 0.9992 - val_loss: 0.6686 - val_precision: 0.9887 - val_recall:
0.9821 - val_top3_accuracy: 0.9977 - val_top5_accuracy: 0.9992 -
learning_rate: 1.0000e-05

Epoch 117/120

1058/1058 ————— 383s 360ms/step -
accuracy: 0.9979 - auc: 1.0000 - loss: 0.6416 - precision: 0.9988 - recall:
0.9964 - top3_accuracy: 0.9999 - top5_accuracy: 1.0000 - val_accuracy:
0.9854 - val_auc: 0.9992 - val_loss: 0.6652 - val_precision: 0.9900 - val_recall:
0.9821 - val_top3_accuracy: 0.9972 - val_top5_accuracy: 0.9980 -
learning_rate: 1.0000e-05

Epoch 118/120

1058/1058 ————— 384s 358ms/step -
accuracy: 0.9975 - auc: 1.0000 - loss: 0.6384 - precision: 0.9986 - recall:
0.9955 - top3_accuracy: 1.0000 - top5_accuracy: 1.0000 - val_accuracy:
0.9853 - val_auc: 0.9989 - val_loss: 0.6646 - val_precision: 0.9890 - val_recall:
0.9814 - val_top3_accuracy: 0.9972 - val_top5_accuracy: 0.9985 -
learning_rate: 1.0000e-05

Epoch 119/120

1058/1058 ————— 378s 355ms/step -
accuracy: 0.9979 - auc: 1.0000 - loss: 0.6345 - precision: 0.9988 - recall:
0.9964 - top3_accuracy: 0.9999 - top5_accuracy: 1.0000 - val_accuracy:
0.9856 - val_auc: 0.9991 - val_loss: 0.6581 - val_precision: 0.9902 - val_recall:
0.9824 - val_top3_accuracy: 0.9975 - val_top5_accuracy: 0.9983 -
learning_rate: 1.0000e-05

Epoch 120/120

1058/1058 ————— 383s 360ms/step -
accuracy: 0.9969 - auc: 1.0000 - loss: 0.6326 - precision: 0.9984 - recall:
0.9954 - top3_accuracy: 0.9999 - top5_accuracy: 1.0000 - val_accuracy:
0.9861 - val_auc: 0.9988 - val_loss: 0.6554 - val_precision: 0.9895 - val_recall:
0.9826 - val_top3_accuracy: 0.9968 - val_top5_accuracy: 0.9977 -
learning_rate: 1.0000e-05