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Epoch 1/200
35/35 [=====] - 14s 273ms/step - loss: 0.6864 - accuracy: 0.5372 - val_loss: 0.6773 - val_accuracy: 0.6236
Epoch 2/200
35/35 [=====] - 7s 204ms/step - loss: 0.6771 - accuracy: 0.5904 - val_loss: 0.6680 - val_accuracy: 0.7073
Epoch 3/200
35/35 [=====] - 7s 214ms/step - loss: 0.6700 - accuracy: 0.6167 - val_loss: 0.6573 - val_accuracy: 0.6964
Epoch 4/200
35/35 [=====] - 8s 240ms/step - loss: 0.6618 - accuracy: 0.6535 - val_loss: 0.6458 - val_accuracy: 0.7600
Epoch 5/200
35/35 [=====] - 7s 207ms/step - loss: 0.6502 - accuracy: 0.6735 - val_loss: 0.6406 - val_accuracy: 0.6436
Epoch 6/200
35/35 [=====] - 7s 206ms/step - loss: 0.6406 - accuracy: 0.6857 - val_loss: 0.6257 - val_accuracy: 0.7436
Epoch 7/200
35/35 [=====] - 7s 212ms/step - loss: 0.6332 - accuracy: 0.7016 - val_loss: 0.6129 - val_accuracy: 0.7873
Epoch 8/200
35/35 [=====] - 7s 206ms/step - loss: 0.6268 - accuracy: 0.7107 - val_loss: 0.6049 - val_accuracy: 0.7709
Epoch 9/200
35/35 [=====] - 7s 203ms/step - loss: 0.6167 - accuracy: 0.7171 - val_loss: 0.5948 - val_accuracy: 0.7818
Epoch 10/200
35/35 [=====] - 7s 203ms/step - loss: 0.6096 - accuracy: 0.7171 - val_loss: 0.5864 - val_accuracy: 0.7818
Epoch 11/200
35/35 [=====] - 7s 203ms/step - loss: 0.6039 - accuracy: 0.7252 - val_loss: 0.5771 - val_accuracy: 0.8055
Epoch 12/200
35/35 [=====] - 7s 205ms/step - loss: 0.5932 - accuracy: 0.7298 - val_loss: 0.5680 - val_accuracy: 0.8018
Epoch 13/200
35/35 [=====] - 7s 207ms/step - loss: 0.5913 - accuracy: 0.7348 - val_loss: 0.5603 - val_accuracy: 0.8073
Epoch 14/200
35/35 [=====] - 7s 204ms/step - loss: 0.5813 - accuracy: 0.7520 - val_loss: 0.5549 - val_accuracy: 0.8055
Epoch 15/200
35/35 [=====] - 7s 203ms/step - loss: 0.5757 - accuracy: 0.7384 - val_loss: 0.5525 - val_accuracy: 0.7618
Epoch 16/200
35/35 [=====] - 7s 202ms/step - loss: 0.5701 - accuracy: 0.7520 - val_loss: 0.5505 - val_accuracy: 0.7455
Epoch 17/200
35/35 [=====] - 7s 207ms/step - loss: 0.5696 - accuracy: 0.7348 - val_loss: 0.5334 - val_accuracy: 0.8164
Epoch 18/200
35/35 [=====] - 7s 204ms/step - loss: 0.5622 - accuracy: 0.7470 - val_loss: 0.5258 - val_accuracy: 0.8291
Epoch 19/200
35/35 [=====] - 7s 203ms/step - loss: 0.5546 - accuracy: 0.7507 - val_loss: 0.5204 - val_accuracy: 0.8309
Epoch 20/200
35/35 [=====] - 7s 206ms/step - loss: 0.5489 - accuracy: 0.7620 - val_loss: 0.5145 - val_accuracy: 0.8309
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Epoch 21/200
35/35 [=====] - 7s 200ms/step - loss: 0.5454 - accuracy: 0.7602 - val_loss: 0.5074 - val_accuracy: 0.8400
Epoch 22/200
35/35 [=====] - 7s 201ms/step - loss: 0.5426 - accuracy: 0.7570 - val_loss: 0.5073 - val_accuracy: 0.7982
Epoch 23/200
35/35 [=====] - 7s 200ms/step - loss: 0.5334 - accuracy: 0.7589 - val_loss: 0.4976 - val_accuracy: 0.8364
Epoch 24/200
35/35 [=====] - 7s 199ms/step - loss: 0.5275 - accuracy: 0.7748 - val_loss: 0.4920 - val_accuracy: 0.8436
Epoch 25/200
35/35 [=====] - 7s 200ms/step - loss: 0.5221 - accuracy: 0.7734 - val_loss: 0.4895 - val_accuracy: 0.8255
Epoch 26/200
35/35 [=====] - 7s 200ms/step - loss: 0.5237 - accuracy: 0.7725 - val_loss: 0.4827 - val_accuracy: 0.8509
Epoch 27/200
35/35 [=====] - 7s 200ms/step - loss: 0.5162 - accuracy: 0.7729 - val_loss: 0.4825 - val_accuracy: 0.8218
Epoch 28/200
35/35 [=====] - 7s 200ms/step - loss: 0.5142 - accuracy: 0.7743 - val_loss: 0.4746 - val_accuracy: 0.8509
Epoch 29/200
35/35 [=====] - 7s 200ms/step - loss: 0.5124 - accuracy: 0.7743 - val_loss: 0.4715 - val_accuracy: 0.8491
Epoch 30/200
35/35 [=====] - 7s 202ms/step - loss: 0.5095 - accuracy: 0.7761 - val_loss: 0.4683 - val_accuracy: 0.8509
Epoch 31/200
35/35 [=====] - 7s 203ms/step - loss: 0.5058 - accuracy: 0.7761 - val_loss: 0.4651 - val_accuracy: 0.8582
Epoch 32/200
35/35 [=====] - 7s 201ms/step - loss: 0.5011 - accuracy: 0.7929 - val_loss: 0.4615 - val_accuracy: 0.8545
Epoch 33/200
35/35 [=====] - 7s 206ms/step - loss: 0.4984 - accuracy: 0.7875 - val_loss: 0.4581 - val_accuracy: 0.8618
Epoch 34/200
35/35 [=====] - 7s 204ms/step - loss: 0.4971 - accuracy: 0.7861 - val_loss: 0.4572 - val_accuracy: 0.8436
Epoch 35/200
35/35 [=====] - 7s 205ms/step - loss: 0.4931 - accuracy: 0.7902 - val_loss: 0.4537 - val_accuracy: 0.8600
Epoch 36/200
35/35 [=====] - 7s 203ms/step - loss: 0.4933 - accuracy: 0.7888 - val_loss: 0.4590 - val_accuracy: 0.8182
Epoch 37/200
35/35 [=====] - 7s 202ms/step - loss: 0.4854 - accuracy: 0.7929 - val_loss: 0.4489 - val_accuracy: 0.8509
Epoch 38/200
35/35 [=====] - 7s 203ms/step - loss: 0.4902 - accuracy: 0.7947 - val_loss: 0.4464 - val_accuracy: 0.8564
Epoch 39/200
35/35 [=====] - 7s 201ms/step - loss: 0.4774 - accuracy: 0.7979 - val_loss: 0.4467 - val_accuracy: 0.8309
Epoch 40/200
35/35 [=====] - 7s 202ms/step - loss: 0.4808 - accuracy: 0.7934 - val_loss: 0.4413 - val_accuracy: 0.8582
Epoch 41/200
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35/35 [=====] - 7s 202ms/step - loss: 0.4804 - accu
racy: 0.7965 - val_loss: 0.4391 - val_accuracy: 0.8600
Epoch 42/200
35/35 [=====] - 7s 201ms/step - loss: 0.4727 - accu
racy: 0.8038 - val_loss: 0.4396 - val_accuracy: 0.8473
Epoch 43/200
35/35 [=====] - 7s 199ms/step - loss: 0.4703 - accu
racy: 0.7993 - val_loss: 0.4343 - val_accuracy: 0.8582
Epoch 44/200
35/35 [=====] - 7s 204ms/step - loss: 0.4663 - accu
racy: 0.8097 - val_loss: 0.4331 - val_accuracy: 0.8582
Epoch 45/200
35/35 [=====] - 7s 204ms/step - loss: 0.4674 - accu
racy: 0.8020 - val_loss: 0.4330 - val_accuracy: 0.8527
Epoch 46/200
35/35 [=====] - 7s 204ms/step - loss: 0.4715 - accu
racy: 0.8029 - val_loss: 0.4313 - val_accuracy: 0.8545
Epoch 47/200
35/35 [=====] - 7s 207ms/step - loss: 0.4662 - accu
racy: 0.8052 - val_loss: 0.4287 - val_accuracy: 0.8564
Epoch 48/200
35/35 [=====] - 7s 202ms/step - loss: 0.4659 - accu
racy: 0.8074 - val_loss: 0.4267 - val_accuracy: 0.8545
Epoch 49/200
35/35 [=====] - 7s 211ms/step - loss: 0.4634 - accu
racy: 0.8056 - val_loss: 0.4271 - val_accuracy: 0.8564
Epoch 50/200
35/35 [=====] - 8s 220ms/step - loss: 0.4644 - accu
racy: 0.8029 - val_loss: 0.4248 - val_accuracy: 0.8545
Epoch 51/200
35/35 [=====] - 7s 214ms/step - loss: 0.4577 - accu
racy: 0.8174 - val_loss: 0.4267 - val_accuracy: 0.8455
Epoch 52/200
35/35 [=====] - 8s 219ms/step - loss: 0.4560 - accu
racy: 0.8152 - val_loss: 0.4225 - val_accuracy: 0.8564
Epoch 53/200
35/35 [=====] - 7s 208ms/step - loss: 0.4512 - accu
racy: 0.8170 - val_loss: 0.4220 - val_accuracy: 0.8545
Epoch 54/200
35/35 [=====] - 8s 223ms/step - loss: 0.4517 - accu
racy: 0.8120 - val_loss: 0.4245 - val_accuracy: 0.8455
Epoch 55/200
35/35 [=====] - 7s 207ms/step - loss: 0.4556 - accu
racy: 0.8097 - val_loss: 0.4200 - val_accuracy: 0.8618
Epoch 56/200
35/35 [=====] - 7s 201ms/step - loss: 0.4503 - accu
racy: 0.8161 - val_loss: 0.4169 - val_accuracy: 0.8600
Epoch 57/200
35/35 [=====] - 7s 205ms/step - loss: 0.4436 - accu
racy: 0.8215 - val_loss: 0.4162 - val_accuracy: 0.8582
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Epoch 58/200
35/35 [=====] - 7s 213ms/step - loss: 0.4386 - accuracy: 0.8215 - val_loss: 0.4155 - val_accuracy: 0.8545
Epoch 59/200
35/35 [=====] - 7s 208ms/step - loss: 0.4419 - accuracy: 0.8174 - val_loss: 0.4126 - val_accuracy: 0.8600
Epoch 60/200
35/35 [=====] - 8s 231ms/step - loss: 0.4456 - accuracy: 0.8129 - val_loss: 0.4185 - val_accuracy: 0.8509
Epoch 61/200
35/35 [=====] - 8s 226ms/step - loss: 0.4406 - accuracy: 0.8179 - val_loss: 0.4114 - val_accuracy: 0.8600
Epoch 62/200
35/35 [=====] - 8s 216ms/step - loss: 0.4424 - accuracy: 0.8311 - val_loss: 0.4106 - val_accuracy: 0.8600
Epoch 63/200
35/35 [=====] - 8s 215ms/step - loss: 0.4386 - accuracy: 0.8179 - val_loss: 0.4107 - val_accuracy: 0.8600
Epoch 64/200
35/35 [=====] - 8s 218ms/step - loss: 0.4396 - accuracy: 0.8256 - val_loss: 0.4106 - val_accuracy: 0.8545
Epoch 65/200
35/35 [=====] - 8s 217ms/step - loss: 0.4310 - accuracy: 0.8229 - val_loss: 0.4089 - val_accuracy: 0.8600
Epoch 66/200
35/35 [=====] - 7s 215ms/step - loss: 0.4349 - accuracy: 0.8252 - val_loss: 0.4111 - val_accuracy: 0.8564
Epoch 67/200
35/35 [=====] - 8s 216ms/step - loss: 0.4296 - accuracy: 0.8256 - val_loss: 0.4063 - val_accuracy: 0.8582
Epoch 68/200
35/35 [=====] - 7s 215ms/step - loss: 0.4299 - accuracy: 0.8302 - val_loss: 0.4050 - val_accuracy: 0.8582
Epoch 69/200
35/35 [=====] - 7s 203ms/step - loss: 0.4300 - accuracy: 0.8306 - val_loss: 0.4047 - val_accuracy: 0.8600
Epoch 70/200
35/35 [=====] - 8s 215ms/step - loss: 0.4310 - accuracy: 0.8206 - val_loss: 0.4065 - val_accuracy: 0.8509
Epoch 71/200
35/35 [=====] - 7s 211ms/step - loss: 0.4275 - accuracy: 0.8265 - val_loss: 0.4028 - val_accuracy: 0.8600
Epoch 72/200
35/35 [=====] - 8s 217ms/step - loss: 0.4221 - accuracy: 0.8374 - val_loss: 0.4047 - val_accuracy: 0.8509
Epoch 73/200
35/35 [=====] - 7s 213ms/step - loss: 0.4307 - accuracy: 0.8265 - val_loss: 0.4021 - val_accuracy: 0.8618
Epoch 74/200
35/35 [=====] - 7s 211ms/step - loss: 0.4249 - accuracy: 0.8333 - val_loss: 0.4015 - val_accuracy: 0.8636
Epoch 75/200
35/35 [=====] - 7s 213ms/step - loss: 0.4220 - accuracy: 0.8315 - val_loss: 0.4077 - val_accuracy: 0.8564
Epoch 76/200
35/35 [=====] - 8s 217ms/step - loss: 0.4185 - accuracy: 0.8342 - val_loss: 0.4003 - val_accuracy: 0.8600
Epoch 77/200
35/35 [=====] - 8s 215ms/step - loss: 0.4263 - accuracy: 0.8324 - val_loss: 0.3973 - val_accuracy: 0.8582
Epoch 78/200
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35/35 [=====] - 8s 219ms/step - loss: 0.4253 - accu
racy: 0.8306 - val_loss: 0.4008 - val_accuracy: 0.8509
Epoch 79/200
35/35 [=====] - 8s 222ms/step - loss: 0.4168 - accu
racy: 0.8379 - val_loss: 0.3980 - val_accuracy: 0.8618
Epoch 80/200
35/35 [=====] - 7s 212ms/step - loss: 0.4153 - accu
racy: 0.8370 - val_loss: 0.3971 - val_accuracy: 0.8564
Epoch 81/200
35/35 [=====] - 7s 208ms/step - loss: 0.4202 - accu
racy: 0.8333 - val_loss: 0.3943 - val_accuracy: 0.8636
Epoch 82/200
35/35 [=====] - 7s 209ms/step - loss: 0.4094 - accu
racy: 0.8383 - val_loss: 0.3924 - val_accuracy: 0.8636
Epoch 83/200
35/35 [=====] - 7s 207ms/step - loss: 0.4108 - accu
racy: 0.8342 - val_loss: 0.3923 - val_accuracy: 0.8636
Epoch 84/200
35/35 [=====] - 7s 209ms/step - loss: 0.4128 - accu
racy: 0.8388 - val_loss: 0.3930 - val_accuracy: 0.8582
Epoch 85/200
35/35 [=====] - 7s 214ms/step - loss: 0.4107 - accu
racy: 0.8365 - val_loss: 0.3910 - val_accuracy: 0.8673
Epoch 86/200
35/35 [=====] - 7s 208ms/step - loss: 0.4052 - accu
racy: 0.8447 - val_loss: 0.3900 - val_accuracy: 0.8691
Epoch 87/200
35/35 [=====] - 7s 208ms/step - loss: 0.4087 - accu
racy: 0.8383 - val_loss: 0.3911 - val_accuracy: 0.8600
Epoch 88/200
35/35 [=====] - 7s 207ms/step - loss: 0.4116 - accu
racy: 0.8429 - val_loss: 0.3913 - val_accuracy: 0.8600
Epoch 89/200
35/35 [=====] - 7s 206ms/step - loss: 0.4119 - accu
racy: 0.8411 - val_loss: 0.3935 - val_accuracy: 0.8491
Epoch 90/200
35/35 [=====] - 7s 207ms/step - loss: 0.4102 - accu
racy: 0.8333 - val_loss: 0.3882 - val_accuracy: 0.8691
Epoch 91/200
35/35 [=====] - 7s 206ms/step - loss: 0.4054 - accu
racy: 0.8488 - val_loss: 0.3873 - val_accuracy: 0.8673
Epoch 92/200
35/35 [=====] - 7s 207ms/step - loss: 0.4011 - accu
racy: 0.8397 - val_loss: 0.3903 - val_accuracy: 0.8509
Epoch 93/200
35/35 [=====] - 7s 211ms/step - loss: 0.4041 - accu
racy: 0.8424 - val_loss: 0.3857 - val_accuracy: 0.8727
Epoch 94/200
35/35 [=====] - 7s 208ms/step - loss: 0.3973 - accu
racy: 0.8497 - val_loss: 0.3844 - val_accuracy: 0.8691
Epoch 95/200
35/35 [=====] - 7s 206ms/step - loss: 0.4001 - accu
racy: 0.8470 - val_loss: 0.3844 - val_accuracy: 0.8636
Epoch 96/200
35/35 [=====] - 7s 209ms/step - loss: 0.3982 - accu
racy: 0.8438 - val_loss: 0.3833 - val_accuracy: 0.8691
Epoch 97/200
35/35 [=====] - 7s 208ms/step - loss: 0.4050 - accu
racy: 0.8365 - val_loss: 0.3836 - val_accuracy: 0.8655
Epoch 98/200
35/35 [=====] - 7s 206ms/step - loss: 0.3968 - accu
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racy: 0.8470 - val_loss: 0.3829 - val_accuracy: 0.8655
Epoch 99/200
35/35 [=====] - 8s 215ms/step - loss: 0.3970 - accu
racy: 0.8447 - val_loss: 0.3809 - val_accuracy: 0.8673
Epoch 100/200
35/35 [=====] - 8s 217ms/step - loss: 0.3966 - accu
racy: 0.8451 - val_loss: 0.3808 - val_accuracy: 0.8691
Epoch 101/200
35/35 [=====] - 7s 210ms/step - loss: 0.3942 - accu
racy: 0.8574 - val_loss: 0.3792 - val_accuracy: 0.8691
Epoch 102/200
35/35 [=====] - 8s 217ms/step - loss: 0.3904 - accu
racy: 0.8479 - val_loss: 0.3797 - val_accuracy: 0.8691
Epoch 103/200
35/35 [=====] - 7s 214ms/step - loss: 0.3937 - accu
racy: 0.8492 - val_loss: 0.3775 - val_accuracy: 0.8691
Epoch 104/200
35/35 [=====] - 8s 219ms/step - loss: 0.3956 - accu
racy: 0.8424 - val_loss: 0.3834 - val_accuracy: 0.8545
Epoch 105/200
35/35 [=====] - 7s 215ms/step - loss: 0.3931 - accu
racy: 0.8451 - val_loss: 0.3770 - val_accuracy: 0.8727
Epoch 106/200
35/35 [=====] - 7s 215ms/step - loss: 0.3882 - accu
racy: 0.8451 - val_loss: 0.3786 - val_accuracy: 0.8618
Epoch 107/200
35/35 [=====] - 7s 209ms/step - loss: 0.3897 - accu
racy: 0.8479 - val_loss: 0.3750 - val_accuracy: 0.8691
Epoch 108/200
35/35 [=====] - 7s 210ms/step - loss: 0.3837 - accu
racy: 0.8515 - val_loss: 0.3770 - val_accuracy: 0.8673
Epoch 109/200
35/35 [=====] - 8s 215ms/step - loss: 0.3929 - accu
racy: 0.8456 - val_loss: 0.3776 - val_accuracy: 0.8618
Epoch 110/200
35/35 [=====] - 7s 210ms/step - loss: 0.3883 - accu
racy: 0.8479 - val_loss: 0.3757 - val_accuracy: 0.8600
Epoch 111/200
35/35 [=====] - 8s 221ms/step - loss: 0.3841 - accu
racy: 0.8510 - val_loss: 0.3719 - val_accuracy: 0.8782
Epoch 112/200
35/35 [=====] - 7s 209ms/step - loss: 0.3835 - accu
racy: 0.8438 - val_loss: 0.3746 - val_accuracy: 0.8600
Epoch 113/200
35/35 [=====] - 7s 206ms/step - loss: 0.3848 - accu
racy: 0.8515 - val_loss: 0.3712 - val_accuracy: 0.8727
Epoch 114/200
35/35 [=====] - 7s 208ms/step - loss: 0.3789 - accu
racy: 0.8574 - val_loss: 0.3705 - val_accuracy: 0.8709
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Epoch 115/200
35/35 [=====] - 7s 211ms/step - loss: 0.3831 - accu
racy: 0.8565 - val_loss: 0.3706 - val_accuracy: 0.8691
Epoch 116/200
35/35 [=====] - 7s 209ms/step - loss: 0.3818 - accu
racy: 0.8506 - val_loss: 0.3713 - val_accuracy: 0.8745
Epoch 117/200
35/35 [=====] - 7s 211ms/step - loss: 0.3888 - accu
racy: 0.8479 - val_loss: 0.3715 - val_accuracy: 0.8655
Epoch 118/200
35/35 [=====] - 7s 213ms/step - loss: 0.3741 - accu
racy: 0.8565 - val_loss: 0.3688 - val_accuracy: 0.8709
Epoch 119/200
35/35 [=====] - 7s 206ms/step - loss: 0.3758 - accu
racy: 0.8547 - val_loss: 0.3684 - val_accuracy: 0.8709
Epoch 120/200
35/35 [=====] - 8s 216ms/step - loss: 0.3765 - accu
racy: 0.8520 - val_loss: 0.3674 - val_accuracy: 0.8782
Epoch 121/200
35/35 [=====] - 7s 207ms/step - loss: 0.3784 - accu
racy: 0.8597 - val_loss: 0.3681 - val_accuracy: 0.8618
Epoch 122/200
35/35 [=====] - 7s 208ms/step - loss: 0.3759 - accu
racy: 0.8547 - val_loss: 0.3651 - val_accuracy: 0.8818
Epoch 123/200
35/35 [=====] - 7s 211ms/step - loss: 0.3765 - accu
racy: 0.8542 - val_loss: 0.3641 - val_accuracy: 0.8800
Epoch 124/200
35/35 [=====] - 7s 209ms/step - loss: 0.3762 - accu
racy: 0.8538 - val_loss: 0.3634 - val_accuracy: 0.8818
Epoch 125/200
35/35 [=====] - 7s 213ms/step - loss: 0.3700 - accu
racy: 0.8597 - val_loss: 0.3633 - val_accuracy: 0.8800
Epoch 126/200
35/35 [=====] - 7s 208ms/step - loss: 0.3736 - accu
racy: 0.8569 - val_loss: 0.3640 - val_accuracy: 0.8764
Epoch 127/200
35/35 [=====] - 7s 211ms/step - loss: 0.3692 - accu
racy: 0.8597 - val_loss: 0.3606 - val_accuracy: 0.8818
Epoch 128/200
35/35 [=====] - 7s 210ms/step - loss: 0.3708 - accu
racy: 0.8551 - val_loss: 0.3611 - val_accuracy: 0.8800
Epoch 129/200
35/35 [=====] - 8s 217ms/step - loss: 0.3631 - accu
racy: 0.8606 - val_loss: 0.3596 - val_accuracy: 0.8782
Epoch 130/200
35/35 [=====] - 7s 206ms/step - loss: 0.3721 - accu
racy: 0.8529 - val_loss: 0.3600 - val_accuracy: 0.8764
Epoch 131/200
35/35 [=====] - 7s 204ms/step - loss: 0.3667 - accu
racy: 0.8592 - val_loss: 0.3604 - val_accuracy: 0.8709
Epoch 132/200
35/35 [=====] - 7s 203ms/step - loss: 0.3623 - accu
racy: 0.8569 - val_loss: 0.3577 - val_accuracy: 0.8782
Epoch 133/200
35/35 [=====] - 7s 211ms/step - loss: 0.3694 - accu
racy: 0.8583 - val_loss: 0.3599 - val_accuracy: 0.8709
Epoch 134/200
35/35 [=====] - 7s 210ms/step - loss: 0.3717 - accu
racy: 0.8574 - val_loss: 0.3587 - val_accuracy: 0.8673
Epoch 135/200
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35/35 [=====] - 7s 208ms/step - loss: 0.3611 - accu
racy: 0.8610 - val_loss: 0.3560 - val_accuracy: 0.8818
Epoch 136/200
35/35 [=====] - 7s 206ms/step - loss: 0.3637 - accu
racy: 0.8619 - val_loss: 0.3571 - val_accuracy: 0.8800
Epoch 137/200
35/35 [=====] - 7s 210ms/step - loss: 0.3636 - accu
racy: 0.8642 - val_loss: 0.3551 - val_accuracy: 0.8873
Epoch 138/200
35/35 [=====] - 7s 207ms/step - loss: 0.3595 - accu
racy: 0.8601 - val_loss: 0.3603 - val_accuracy: 0.8600
Epoch 139/200
35/35 [=====] - 8s 218ms/step - loss: 0.3654 - accu
racy: 0.8629 - val_loss: 0.3556 - val_accuracy: 0.8818
Epoch 140/200
35/35 [=====] - 8s 220ms/step - loss: 0.3633 - accu
racy: 0.8638 - val_loss: 0.3537 - val_accuracy: 0.8782
Epoch 141/200
35/35 [=====] - 7s 208ms/step - loss: 0.3601 - accu
racy: 0.8674 - val_loss: 0.3580 - val_accuracy: 0.8636
Epoch 142/200
35/35 [=====] - 7s 211ms/step - loss: 0.3608 - accu
racy: 0.8624 - val_loss: 0.3537 - val_accuracy: 0.8727
Epoch 143/200
35/35 [=====] - 8s 219ms/step - loss: 0.3561 - accu
racy: 0.8697 - val_loss: 0.3507 - val_accuracy: 0.8782
Epoch 144/200
35/35 [=====] - 8s 215ms/step - loss: 0.3596 - accu
racy: 0.8656 - val_loss: 0.3557 - val_accuracy: 0.8655
Epoch 145/200
35/35 [=====] - 8s 217ms/step - loss: 0.3580 - accu
racy: 0.8633 - val_loss: 0.3495 - val_accuracy: 0.8818
Epoch 146/200
35/35 [=====] - 7s 211ms/step - loss: 0.3525 - accu
racy: 0.8683 - val_loss: 0.3520 - val_accuracy: 0.8691
Epoch 147/200
35/35 [=====] - 8s 218ms/step - loss: 0.3620 - accu
racy: 0.8638 - val_loss: 0.3488 - val_accuracy: 0.8818
Epoch 148/200
35/35 [=====] - 8s 216ms/step - loss: 0.3550 - accu
racy: 0.8638 - val_loss: 0.3478 - val_accuracy: 0.8836
Epoch 149/200
35/35 [=====] - 8s 218ms/step - loss: 0.3537 - accu
racy: 0.8647 - val_loss: 0.3513 - val_accuracy: 0.8673
Epoch 150/200
35/35 [=====] - 8s 222ms/step - loss: 0.3564 - accu
racy: 0.8715 - val_loss: 0.3480 - val_accuracy: 0.8782
Epoch 151/200
35/35 [=====] - 7s 212ms/step - loss: 0.3513 - accu
racy: 0.8701 - val_loss: 0.3475 - val_accuracy: 0.8836
Epoch 152/200
35/35 [=====] - 7s 210ms/step - loss: 0.3547 - accu
racy: 0.8642 - val_loss: 0.3476 - val_accuracy: 0.8782
Epoch 153/200
35/35 [=====] - 7s 208ms/step - loss: 0.3514 - accu
racy: 0.8683 - val_loss: 0.3455 - val_accuracy: 0.8764
Epoch 154/200
35/35 [=====] - 7s 210ms/step - loss: 0.3445 - accu
racy: 0.8801 - val_loss: 0.3485 - val_accuracy: 0.8655
Epoch 155/200
35/35 [=====] - 7s 207ms/step - loss: 0.3464 - accu
```



```
racy: 0.8688 - val_loss: 0.3437 - val_accuracy: 0.8764
Epoch 156/200
35/35 [=====] - 7s 206ms/step - loss: 0.3460 - accu
racy: 0.8701 - val_loss: 0.3438 - val_accuracy: 0.8709
Epoch 157/200
35/35 [=====] - 7s 208ms/step - loss: 0.3423 - accu
racy: 0.8724 - val_loss: 0.3417 - val_accuracy: 0.8782
Epoch 158/200
35/35 [=====] - 7s 209ms/step - loss: 0.3451 - accu
racy: 0.8724 - val_loss: 0.3427 - val_accuracy: 0.8836
Epoch 159/200
35/35 [=====] - 7s 205ms/step - loss: 0.3461 - accu
racy: 0.8715 - val_loss: 0.3427 - val_accuracy: 0.8855
Epoch 160/200
35/35 [=====] - 7s 205ms/step - loss: 0.3488 - accu
racy: 0.8669 - val_loss: 0.3401 - val_accuracy: 0.8818
Epoch 161/200
35/35 [=====] - 7s 204ms/step - loss: 0.3453 - accu
racy: 0.8742 - val_loss: 0.3419 - val_accuracy: 0.8727
Epoch 162/200
35/35 [=====] - 7s 208ms/step - loss: 0.3386 - accu
racy: 0.8674 - val_loss: 0.3413 - val_accuracy: 0.8691
Epoch 163/200
35/35 [=====] - 7s 207ms/step - loss: 0.3440 - accu
racy: 0.8706 - val_loss: 0.3392 - val_accuracy: 0.8818
Epoch 164/200
35/35 [=====] - 7s 213ms/step - loss: 0.3432 - accu
racy: 0.8697 - val_loss: 0.3411 - val_accuracy: 0.8691
Epoch 165/200
35/35 [=====] - 7s 217ms/step - loss: 0.3449 - accu
racy: 0.8683 - val_loss: 0.3406 - val_accuracy: 0.8709
Epoch 166/200
35/35 [=====] - 7s 209ms/step - loss: 0.3443 - accu
racy: 0.8765 - val_loss: 0.3399 - val_accuracy: 0.8782
Epoch 167/200
35/35 [=====] - 7s 204ms/step - loss: 0.3376 - accu
racy: 0.8715 - val_loss: 0.3484 - val_accuracy: 0.8527
Epoch 168/200
35/35 [=====] - 7s 204ms/step - loss: 0.3367 - accu
racy: 0.8719 - val_loss: 0.3375 - val_accuracy: 0.8782
Epoch 169/200
35/35 [=====] - 7s 205ms/step - loss: 0.3409 - accu
racy: 0.8774 - val_loss: 0.3383 - val_accuracy: 0.8818
Epoch 170/200
35/35 [=====] - 7s 208ms/step - loss: 0.3397 - accu
racy: 0.8756 - val_loss: 0.3349 - val_accuracy: 0.8855
Epoch 171/200
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35/35 [=====] - 7s 212ms/step - loss: 0.3373 - accu
racy: 0.8728 - val_loss: 0.3337 - val_accuracy: 0.8855
Epoch 172/200
35/35 [=====] - 7s 212ms/step - loss: 0.3313 - accu
racy: 0.8742 - val_loss: 0.3387 - val_accuracy: 0.8673
Epoch 173/200
35/35 [=====] - 7s 211ms/step - loss: 0.3320 - accu
racy: 0.8751 - val_loss: 0.3384 - val_accuracy: 0.8655
Epoch 174/200
35/35 [=====] - 7s 213ms/step - loss: 0.3361 - accu
racy: 0.8728 - val_loss: 0.3334 - val_accuracy: 0.8782
Epoch 175/200
35/35 [=====] - 8s 217ms/step - loss: 0.3352 - accu
racy: 0.8819 - val_loss: 0.3348 - val_accuracy: 0.8727
Epoch 176/200
35/35 [=====] - 8s 216ms/step - loss: 0.3282 - accu
racy: 0.8774 - val_loss: 0.3303 - val_accuracy: 0.8873
Epoch 177/200
35/35 [=====] - 8s 221ms/step - loss: 0.3305 - accu
racy: 0.8797 - val_loss: 0.3305 - val_accuracy: 0.8873
Epoch 178/200
35/35 [=====] - 7s 206ms/step - loss: 0.3355 - accu
racy: 0.8774 - val_loss: 0.3315 - val_accuracy: 0.8855
Epoch 179/200
35/35 [=====] - 8s 224ms/step - loss: 0.3255 - accu
racy: 0.8783 - val_loss: 0.3293 - val_accuracy: 0.8800
Epoch 180/200
35/35 [=====] - 7s 214ms/step - loss: 0.3329 - accu
racy: 0.8738 - val_loss: 0.3293 - val_accuracy: 0.8891
Epoch 181/200
35/35 [=====] - 7s 208ms/step - loss: 0.3293 - accu
racy: 0.8824 - val_loss: 0.3337 - val_accuracy: 0.8691
Epoch 182/200
35/35 [=====] - 8s 226ms/step - loss: 0.3296 - accu
racy: 0.8797 - val_loss: 0.3353 - val_accuracy: 0.8655
Epoch 183/200
35/35 [=====] - 8s 215ms/step - loss: 0.3246 - accu
racy: 0.8878 - val_loss: 0.3278 - val_accuracy: 0.8836
Epoch 184/200
35/35 [=====] - 8s 215ms/step - loss: 0.3261 - accu
racy: 0.8819 - val_loss: 0.3263 - val_accuracy: 0.8891
Epoch 185/200
35/35 [=====] - 8s 227ms/step - loss: 0.3266 - accu
racy: 0.8847 - val_loss: 0.3271 - val_accuracy: 0.8891
Epoch 186/200
35/35 [=====] - 8s 223ms/step - loss: 0.3273 - accu
racy: 0.8783 - val_loss: 0.3300 - val_accuracy: 0.8745
Epoch 187/200
35/35 [=====] - 8s 217ms/step - loss: 0.3241 - accu
racy: 0.8833 - val_loss: 0.3296 - val_accuracy: 0.8727
Epoch 188/200
35/35 [=====] - 7s 211ms/step - loss: 0.3255 - accu
racy: 0.8869 - val_loss: 0.3254 - val_accuracy: 0.8836
Epoch 189/200
35/35 [=====] - 7s 212ms/step - loss: 0.3241 - accu
racy: 0.8810 - val_loss: 0.3278 - val_accuracy: 0.8745
Epoch 190/200
35/35 [=====] - 8s 232ms/step - loss: 0.3215 - accu
racy: 0.8865 - val_loss: 0.3232 - val_accuracy: 0.8909
Epoch 191/200
35/35 [=====] - 7s 214ms/step - loss: 0.3261 - accu
```

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racy: 0.8797 - val_loss: 0.3343 - val_accuracy: 0.8655
Epoch 192/200
35/35 [=====] - 7s 212ms/step - loss: 0.3260 - accu
racy: 0.8837 - val_loss: 0.3246 - val_accuracy: 0.8836
Epoch 193/200
35/35 [=====] - 8s 218ms/step - loss: 0.3211 - accu
racy: 0.8787 - val_loss: 0.3247 - val_accuracy: 0.8782
Epoch 194/200
35/35 [=====] - 7s 209ms/step - loss: 0.3221 - accu
racy: 0.8837 - val_loss: 0.3219 - val_accuracy: 0.8909
Epoch 195/200
35/35 [=====] - 8s 219ms/step - loss: 0.3199 - accu
racy: 0.8869 - val_loss: 0.3221 - val_accuracy: 0.8818
Epoch 196/200
35/35 [=====] - 8s 225ms/step - loss: 0.3102 - accu
racy: 0.8901 - val_loss: 0.3201 - val_accuracy: 0.8818
Epoch 197/200
35/35 [=====] - 8s 220ms/step - loss: 0.3163 - accu
racy: 0.8860 - val_loss: 0.3216 - val_accuracy: 0.8836
Epoch 198/200
35/35 [=====] - 7s 214ms/step - loss: 0.3208 - accu
racy: 0.8824 - val_loss: 0.3201 - val_accuracy: 0.8836
Epoch 199/200
35/35 [=====] - 8s 231ms/step - loss: 0.3155 - accu
racy: 0.8847 - val_loss: 0.3268 - val_accuracy: 0.8673
Epoch 200/200
35/35 [=====] - 8s 216ms/step - loss: 0.3168 - accu
racy: 0.8815 - val_loss: 0.3208 - val_accuracy: 0.8836
```