

Skipping registering GPU devices...

Model: "sequential"

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 64, 128, 32)	320
batch_normalization (BatchNormalization)	(None, 64, 128, 32)	128
max_pooling2d (MaxPooling2D)	(None, 32, 64, 32)	0
conv2d_1 (Conv2D)	(None, 32, 64, 64)	18,496
batch_normalization_1 (BatchNormalization)	(None, 32, 64, 64)	256
max_pooling2d_1 (MaxPooling2D)	(None, 16, 32, 64)	0
conv2d_2 (Conv2D)	(None, 16, 32, 128)	73,856
batch_normalization_2 (BatchNormalization)	(None, 16, 32, 128)	512
max_pooling2d_2 (MaxPooling2D)	(None, 8, 16, 128)	0
conv2d_3 (Conv2D)	(None, 8, 16, 256)	295,168
batch_normalization_3	(None, 8, 16, 256)	1,024

batch_normalization_3 (BatchNormalization)	(None, 8, 16, 256)	1,024
max_pooling2d_3 (MaxPooling2D)	(None, 4, 8, 256)	0
conv2d_4 (Conv2D)	(None, 4, 8, 256)	590,080
batch_normalization_4 (BatchNormalization)	(None, 4, 8, 256)	1,024
max_pooling2d_4 (MaxPooling2D)	(None, 2, 4, 256)	0
flatten (Flatten)	(None, 2048)	0
dense (Dense)	(None, 512)	1,049,088
dense_1 (Dense)	(None, 4)	3,078

Total params: 2,033,030 (7.76 MB)

Trainable params: 2,031,558 (7.75 MB)

Non-trainable params: 1,472 (5.75 KB)

Epoch 1/30

298/298 ————— 54s 174ms/step - accuracy: 0.3190 - loss: 2.4382 - val_accuracy: 0.2830 - val_loss: 1.8729

Epoch 2/30

298/298 ————— 52s 173ms/step - accuracy: 0.4192 - loss: 1.4265 - val_accuracy: 0.4635 - val_loss: 1.3500

Epoch 3/30

298/298 ————— 84s 180ms/step - accuracy: 0.4800 - loss: 1.2930 - val_accuracy: 0.2536 - val_loss: 2.0619

Epoch 4/30

Epoch 4/30

298/298 ————— 51s 173ms/step - accuracy: 0.5179 - loss: 1.2502 - val_accuracy: 0.3476 - val_loss: 1.7188

Epoch 5/30

298/298 ————— 82s 172ms/step - accuracy: 0.5407 - loss: 1.1808 - val_accuracy: 0.3174 - val_loss: 1.7901

Epoch 6/30

298/298 ————— 82s 171ms/step - accuracy: 0.5968 - loss: 1.0628 - val_accuracy: 0.4013 - val_loss: 1.5444

Epoch 7/30

298/298 ————— 82s 171ms/step - accuracy: 0.6255 - loss: 0.9970 - val_accuracy: 0.4945 - val_loss: 1.4021

Epoch 8/30

298/298 ————— 51s 171ms/step - accuracy: 0.6516 - loss: 0.9200 - val_accuracy: 0.5264 - val_loss: 1.2693

Epoch 9/30

298/298 ————— 53s 178ms/step - accuracy: 0.7135 - loss: 0.7762 - val_accuracy: 0.5659 - val_loss: 1.1772

Epoch 10/30

298/298 ————— 51s 170ms/step - accuracy: 0.7431 - loss: 0.7077 - val_accuracy: 0.4626 - val_loss: 1.3850

Epoch 11/30

298/298 ————— 51s 171ms/step - accuracy: 0.7851 - loss: 0.5797 - val_accuracy: 0.4559 - val_loss: 1.5013

Epoch 12/30

298/298 ————— 51s 170ms/step - accuracy: 0.8133 - loss: 0.4947 - val_accuracy: 0.5676 - val_loss: 1.2946

Epoch 13/30

298/298 ————— 51s 170ms/step - accuracy: 0.8530 - loss: 0.3845 - val_accuracy: 0.5273 - val_loss: 1.5676

Epoch 14/30

298/298 ————— 82s 170ms/step - accuracy: 0.9018 - loss: 0.2812 - val_accuracy: 0.5290 - val_loss: 1.9008

Epoch 15/30

298/298 ————— 82s 170ms/step - accuracy: 0.9282 - loss: 0.2028 - val_accuracy: 0.4685 - val_loss: 2.0230

Epoch 16/30

298/298 ————— 51s 170ms/step - accuracy: 0.9237 - loss: 0.2024 - val_accuracy: 0.5500 - val_loss: 2.2362

Epoch 17/30

298/298 ————— 51s 170ms/step - accuracy: 0.9517 - loss: 0.1378 - val_accuracy: 0.5651 - val_loss: 1.5899

Epoch 18/30

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Epoch 19/30
298/298 — 51s 170ms/step - accuracy: 0.9629 - loss: 0.1203 - val_accuracy: 0.5390 - val_loss: 2.3060
Epoch 20/30
298/298 — 51s 170ms/step - accuracy: 0.9646 - loss: 0.0966 - val_accuracy: 0.4794 - val_loss: 2.4551
Epoch 21/30
298/298 — 82s 170ms/step - accuracy: 0.9742 - loss: 0.0797 - val_accuracy: 0.5256 - val_loss: 2.6194
Epoch 22/30
298/298 — 51s 170ms/step - accuracy: 0.9757 - loss: 0.0788 - val_accuracy: 0.5760 - val_loss: 2.4210
Epoch 23/30
298/298 — 51s 170ms/step - accuracy: 0.9490 - loss: 0.1498 - val_accuracy: 0.5155 - val_loss: 2.8635
Epoch 24/30
298/298 — 82s 171ms/step - accuracy: 0.9755 - loss: 0.0914 - val_accuracy: 0.5332 - val_loss: 3.0532
Epoch 25/30
298/298 — 51s 170ms/step - accuracy: 0.9881 - loss: 0.0389 - val_accuracy: 0.5600 - val_loss: 2.2898
Epoch 26/30
298/298 — 82s 170ms/step - accuracy: 0.9654 - loss: 0.1072 - val_accuracy: 0.5802 - val_loss: 2.3851
Epoch 27/30
298/298 — 51s 170ms/step - accuracy: 0.9535 - loss: 0.1486 - val_accuracy: 0.5735 - val_loss: 2.1549
Epoch 28/30
298/298 — 51s 170ms/step - accuracy: 0.9683 - loss: 0.0820 - val_accuracy: 0.5357 - val_loss: 2.4622
Epoch 29/30
298/298 — 51s 170ms/step - accuracy: 0.9757 - loss: 0.0690 - val_accuracy: 0.5810 - val_loss: 2.6987
Epoch 30/30
298/298 — 51s 170ms/step - accuracy: 0.9794 - loss: 0.0565 - val_accuracy: 0.4878 - val_loss: 3.0255
47/47 — 4s 77ms/step - accuracy: 0.4753 - loss: 3.0014
Test Loss: 3.0253, Test Accuracy: 0.4762
47/47 — 4s 80ms/step
ubuntu@ip-10-1-3-207:~/DL_Project$
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