Results:

From the cultivation of the provided network VGG16 was incorporated and then edited to reach the best possible results. Those results are as follows: Training Loss of 0.7360, Training accuracy of 0.7381, Val_Loss of 0.9466, Val_Accuracy of 0.7006, and an evaluate accuracy of 67.7. Much of the Accuracy for this neural network was obtained from data augmentation via ImageGenerator and the augmentation arguments available within it. Tf.images augmentations were pursued but fond to be inefficient in comparison to ImageGenerator. All following versions of the Neural Network were built off base trained layers of VGG16

Num Blocks	Block 1	Block 2	Block 3	Val Loss	Val Accuracy
2	C32+MP+GM	D32+D11		1.3529	0.5327
2	C32+C32 +MP+GM	D32+D32+D11		1.3806	0.5172
3	C32 +MP	C32 +MP+GM	D32+D32+D11	1.4116	0.5029
2	C32+C32 +MP+GM	D64+D32+D11		1.3403	0.5489
2	C32+C64 +MP+GM	D64+D32+D11		1.3201	0.5542
2	C64+C128 +MP+GM	D64+D32+D11		1.3292	0.5334
2	C128+C256 +MP+GM	D64+D32+D11		1.2307	0.5820
2	C256+C512 +MP+GM	D64+D32+D11		1.2763	0.5677
2	C256+C512 +MP+GM	D128+D64+D11		1.3096	0.5561
2	C128+C256 +F	D128+D64+D11		1.2099	0.5813
2	C128+C256 +F	D256+D128+D11		1.2359	0.5690
2	C64+C128 +MP+GM	D4096+D4096+ D4096+D11		1.3257	0.5502
2	C64+C128 +MP+GM	D128+D64+D11		0.9466	0.7006

*Values in table based off of 5 epochs each entry

Layer	Abbreviation
Conv2d(32) act = relu	C32
Conv2d(64) act = relu	C64
Conv2d(128) act = relu	C128
Conv2d(256) act = relu	C256
Conv2d(512) act = relu	C512
Conv2d(1024) act = relu	C1024
Maxpool2D(2,2)	MP2
GlobalMaxPool2D	GM
Flatten	F
Dense(11) act = softmax	D11
Dense(32) act = relu	D32
Dense(64) act = relu	D64
Dense(128) act = relu	D128
Dense(256) act = relu	D256
Dense(512) act = relu	D512
Dense(1024) act = relu	D1024
Dense(4096) act = relu	D4096