

Model: "multi\_input\_model\_v4"

Layer (type)	Output Shape	Param #	Connected to
cnn_input (InputLayer)	(None, 256, 256, 1)	0	[]
conv2d (Conv2D)	(None, 256, 256, 16)	160	['cnn_input[0][0]']
activation (Activation)	(None, 256, 256, 16)	0	['conv2d[0][0]']
batch_normalization (Batch Normalization)	(None, 256, 256, 16)	64	['activation[0][0]']
max_pooling2d (MaxPooling2D)	(None, 128, 128, 16)	0	['batch_normalization[0][0]']
conv2d_1 (Conv2D)	(None, 128, 128, 32)	4640	['max_pooling2d[0][0]']
activation_1 (Activation)	(None, 128, 128, 32)	0	['conv2d_1[0][0]']
batch_normalization_1 (Batch Normalization)	(None, 128, 128, 32)	128	['activation_1[0][0]']
max_pooling2d_1 (MaxPooling2D)	(None, 64, 64, 32)	0	['batch_normalization_1[0][0]']
conv2d_2 (Conv2D)	(None, 64, 64, 64)	18496	['max_pooling2d_1[0][0]']
activation_2 (Activation)	(None, 64, 64, 64)	0	['conv2d_2[0][0]']
batch_normalization_2 (Batch Normalization)	(None, 64, 64, 64)	256	['activation_2[0][0]']
max_pooling2d_2 (MaxPooling2D)	(None, 32, 32, 64)	0	['batch_normalization_2[0][0]']
conv2d_3 (Conv2D)	(None, 32, 32, 128)	73856	['max_pooling2d_2[0][0]']
activation_3 (Activation)	(None, 32, 32, 128)	0	['conv2d_3[0][0]']
batch_normalization_3 (Batch Normalization)	(None, 32, 32, 128)	512	['activation_3[0][0]']
max_pooling2d_3 (MaxPooling2D)	(None, 16, 16, 128)	0	['batch_normalization_3[0][0]']
flatten (Flatten)	(None, 32768)	0	['max_pooling2d_3[0][0]']
dense_1 (Dense)	(None, 32)	1048608	['flatten[0][0]']
activation_4 (Activation)	(None, 32)	0	['dense_1[0][0]']
batch_normalization_4 (Batch Normalization)	(None, 32)	128	['activation_4[0][0]']
dropout (Dropout)	(None, 32)	0	['batch_normalization_4[0][0]']
dense_2 (Dense)	(None, 8)	264	['dropout[0][0]']
activation_5 (Activation)	(None, 8)	0	['dense_2[0][0]']
batch_normalization_5 (Batch Normalization)	(None, 8)	32	['activation_5[0][0]']
dropout_1 (Dropout)	(None, 8)	0	['batch_normalization_5[0][0]']
mlp_input (InputLayer)	(None, 4)	0	[]
dense_3 (Dense)	(None, 4)	36	['dropout_1[0][0]']

dense (Dense)	(None, 15)	75	['mlp_input[0][0]']
activation_6 (Activation)	(None, 4)	0	['dense_3[0][0]']
concatenate (Concatenate)	(None, 19)	0	['dense[0][0]', 'activation_6[0][0]']
dense_4 (Dense)	(None, 32)	640	['concatenate[0][0]']
dense_5 (Dense)	(None, 32)	1056	['dense_4[0][0]']
class_output (Dense)	(None, 15)	495	['dense_5[0][0]']

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Total params: 1,149,446  
Trainable params: 1,148,886  
Non-trainable params: 560