## **Hyperparameter Tuning History**

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 126, 126, 16)	448
max_pooling2d (MaxPooling2D)	(None, 63, 63, 16)	0
conv2d_1 (Conv2D)	(None, 61, 61, 32)	4,640
max_pooling2d_1 (MaxPooling2D)	(None, 30, 30, 32)	0
conv2d_2 (Conv2D)	(None, 28, 28, 64)	18,496
max_pooling2d_2 (MaxPooling2D)	(None, 14, 14, 64)	0
flatten (Flatten)	(None, 12544)	0
dense (Dense)	(None, 128)	1,605,760
dropout (Dropout)	(None, 128)	0
dense_1 (Dense)	(None, 1)	129

Total params: 1,629,473 (6.22 MB)
Trainable params: 1,629,473 (6.22 MB)
Non-trainable params: 0 (0.00 B)

Parameter	Sigmoid v1	Sigmoid v2	Sigmoid v3
Learning Rate	0.001	0.00075	0.00005
Regularization (L2)	0.002	0.003	0.004
Dropout	0.3	0.35	0.4
Batch Size	16	16	16
Activation	ReLu	ReLu	tanh
Optimizer	Adam	Adam	Adam
Early_Stopping	val_loss, min, patience 5	val_loss, min, patience 6	val_loss, min, patience 4

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 126, 126, 16)	448
max_pooling2d (MaxPooling2D)	(None, 63, 63, 16)	0
conv2d_1 (Conv2D)	(None, 61, 61, 32)	4,640
max_pooling2d_1 (MaxPooling2D)	(None, 30, 30, 32)	0
conv2d_2 (Conv2D)	(None, 28, 28, 64)	18,496
max_pooling2d_2 (MaxPooling2D)	(None, 14, 14, 64)	0
flatten (Flatten)	(None, 12544)	0
dense (Dense)	(None, 128)	1,605,760
dropout (Dropout)	(None, 128)	0
dense_1 (Dense)	(None, 2)	258

Total params: 1,629,602 (6.22 MB)
Trainable params: 1,629,602 (6.22 MB)
Non-trainable params: 0 (0.00 B)

Parameter	Softmax v1	Softmax v2	Softmax v3
Learning Rate	0.0001	0.000075	0.00005
Regularization (L2)	0.001	0.002	0.003
Dropout	0.3	0.35	0.4
Batch Size	16	16	16
Activation	ReLu	ReLu	tanh
Optimizer	Adam	Adam	Adam
Early_Stopping	val_loss,min, patience 2	val_loss, min, patience 5	val_loss, min, patience 3

Layer (type)	Output Shape	Param #
mobilenetv2_1.00_128 (Functional)	(None, 4, 4, 1280)	2,257,984
global_average_pooling2d (GlobalAveragePooling2D)	(None, 1280)	0
dense (Dense)	(None, 128)	163,968
dropout (Dropout)	(None, 128)	0
dense_1 (Dense)	(None, 2)	258

Total params: 2,422,210 (9.24 MB)
Trainable params: 2,388,098 (9.11 MB)
Non-trainable params: 34,112 (133.25 KB)

Parameter	MobileNetV2 v1	MobileNetV2 v2	MobileNetV2 v3
Learning Rate	0.0001	0.000075	0.00005
Regularization (L2)	0.002	0.003	0.004
Dropout	0.5	0.6	0.65
Batch Size	16	16	16
Activation	ReLU	ReLU	tanh
Optimizer	Adam	Adam	Adam
Early_Stopping	val_loss, min, patience 5	val_loss, min, patience 6	val_loss, min, patience 4