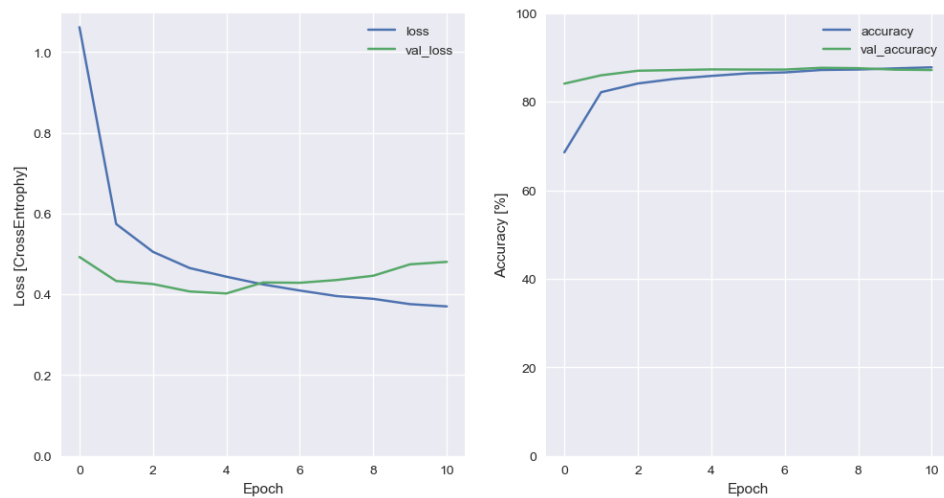


large

Layer (type)	Output Shape	Param #
conv2d_6 (Conv2D)	(None, 28, 28, 32)	320
max_pooling2d_4 (MaxPooling2D)	(None, 14, 14, 32)	0
conv2d_7 (Conv2D)	(None, 12, 12, 64)	18496
max_pooling2d_5 (MaxPooling2D)	(None, 6, 6, 64)	0
conv2d_8 (Conv2D)	(None, 4, 4, 256)	147712
flatten_2 (Flatten)	(None, 4096)	0
dense_7 (Dense)	(None, 256)	1048832
dropout_4 (Dropout)	(None, 256)	0
dense_8 (Dense)	(None, 128)	32896
dropout_5 (Dropout)	(None, 128)	0
dense_9 (Dense)	(None, 64)	8256
dropout_6 (Dropout)	(None, 64)	0
dense_10 (Dense)	(None, 47)	3055

Total params: 1,259,567
Trainable params: 1,259,567
Non-trainable params: 0

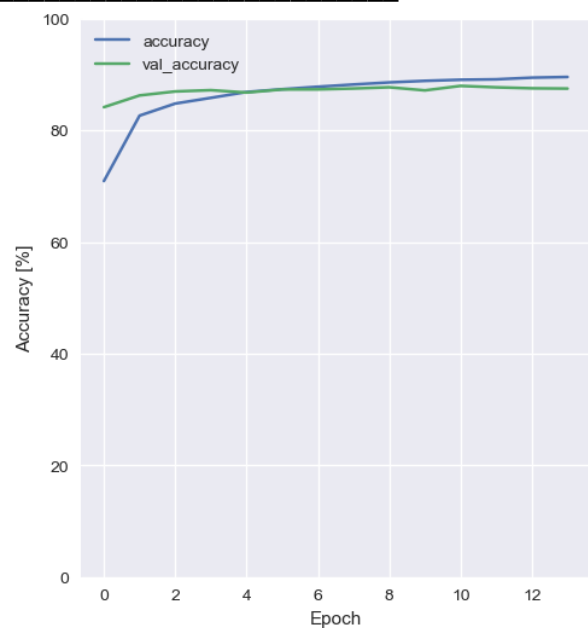
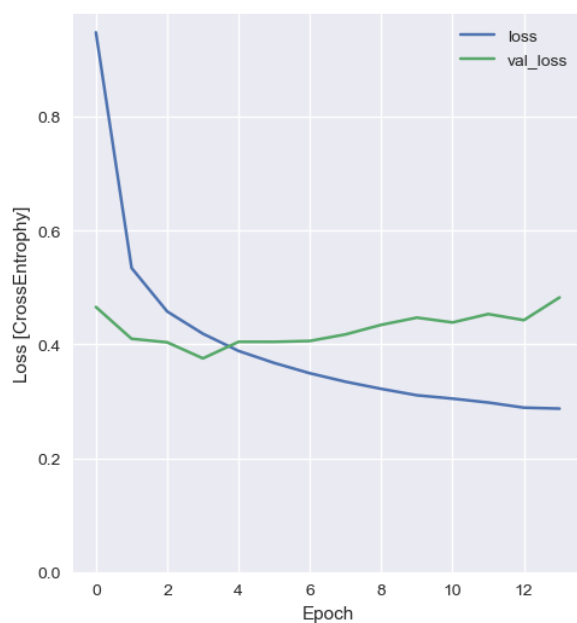


1175/1175 [=====] - 1s 1ms/step - loss: 0.4354 - accuracy: 0.8766

Small

Layer (type)	Output Shape	Param #
conv2d_9 (Conv2D)	(None, 28, 28, 32)	320
max_pooling2d_6 (MaxPooling 2D)	(None, 14, 14, 32)	0
conv2d_10 (Conv2D)	(None, 12, 12, 64)	18496
max_pooling2d_7 (MaxPooling 2D)	(None, 6, 6, 64)	0
conv2d_11 (Conv2D)	(None, 4, 4, 128)	73856
flatten_3 (Flatten)	(None, 2048)	0
dense_11 (Dense)	(None, 64)	131136
dense_12 (Dense)	(None, 64)	4160
dropout_7 (Dropout)	(None, 64)	0
dense_13 (Dense)	(None, 47)	3055

=====
Total params: 231,023
Trainable params: 231,023
Non-trainable params: 0
=====

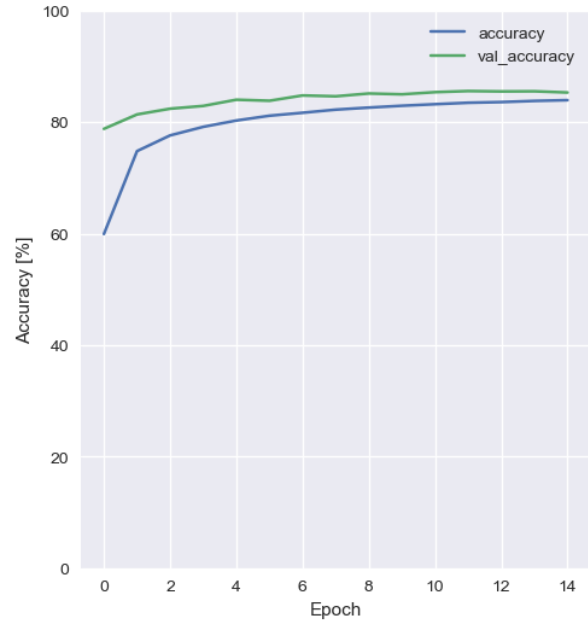
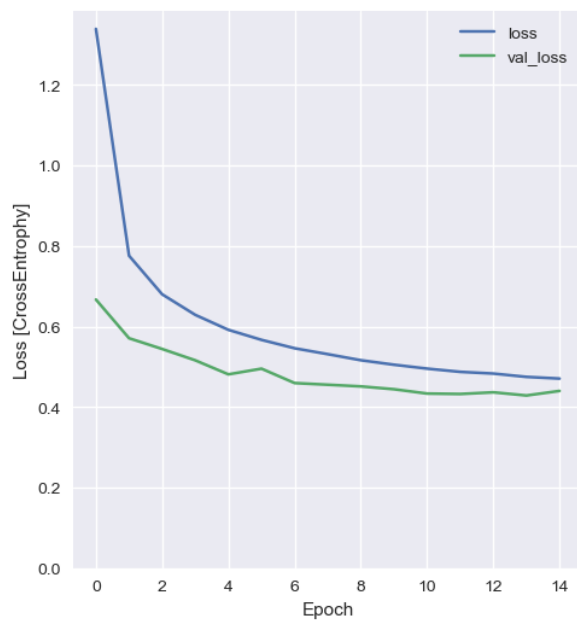


1175/1175 [=====] - 2s 1ms/step - loss: 0.4386 - accuracy: 0.8795

xxs

Layer (type)	Output Shape	Param #
conv2d_6 (Conv2D)	(None, 26, 26, 16)	160
max_pooling2d_4 (MaxPooling 2D)	(None, 13, 13, 16)	0
conv2d_7 (Conv2D)	(None, 11, 11, 16)	2320
max_pooling2d_5 (MaxPooling 2D)	(None, 5, 5, 16)	0
conv2d_8 (Conv2D)	(None, 3, 3, 16)	2320
flatten_2 (Flatten)	(None, 144)	0
dense_4 (Dense)	(None, 47)	6815
dropout_2 (Dropout)	(None, 47)	0
dense_5 (Dense)	(None, 47)	2256

Total params: 13,871
Trainable params: 13,871
Non-trainable params: 0

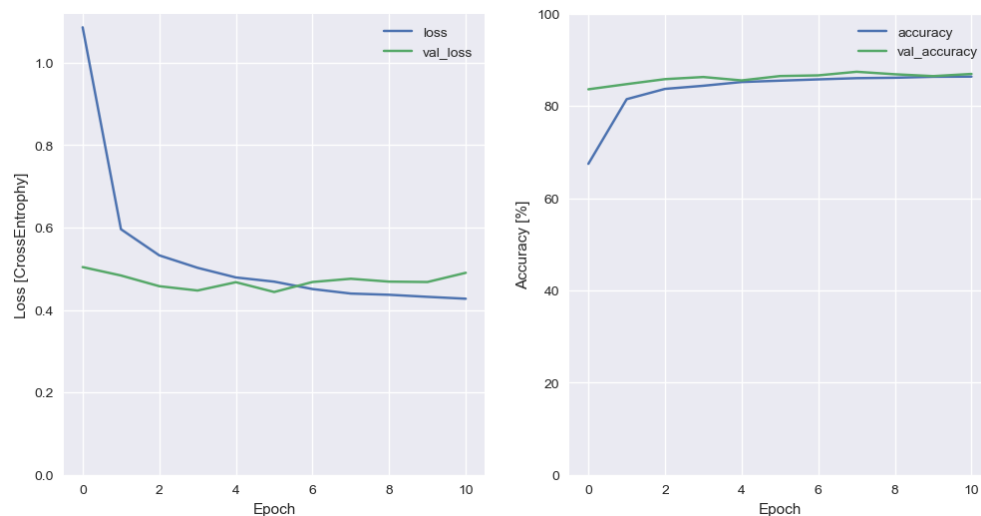


1175/1175 [=====] - 1s 1ms/step - loss: 0.4324 - accuracy: 0.8556

Large v2

Layer (type)	Output Shape	Param #
conv2d_3 (Conv2D)	(None, 28, 28, 32)	1184
max_pooling2d_2 (MaxPooling 2D)	(None, 9, 9, 32)	0
conv2d_4 (Conv2D)	(None, 9, 9, 64)	32832
max_pooling2d_3 (MaxPooling 2D)	(None, 4, 4, 64)	0
conv2d_5 (Conv2D)	(None, 2, 2, 256)	147712
flatten_1 (Flatten)	(None, 1024)	0
dense_3 (Dense)	(None, 256)	262400
dropout_1 (Dropout)	(None, 256)	0
dense_4 (Dense)	(None, 128)	32896
dropout_2 (Dropout)	(None, 128)	0
dense_5 (Dense)	(None, 64)	8256
dropout_3 (Dropout)	(None, 64)	0
dense_6 (Dense)	(None, 47)	3055

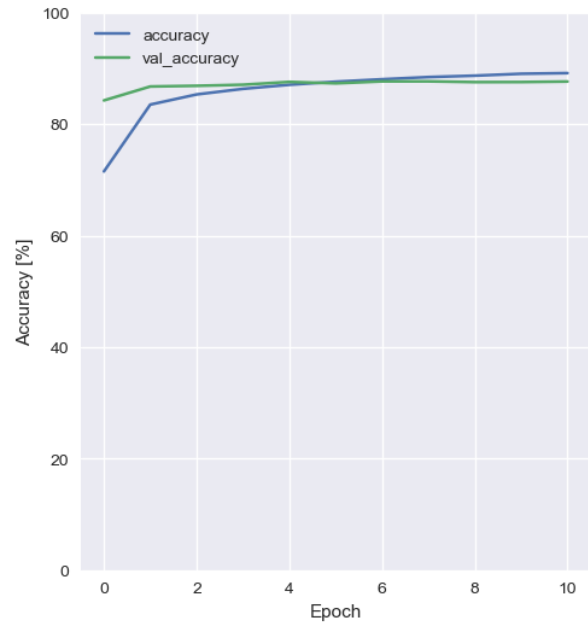
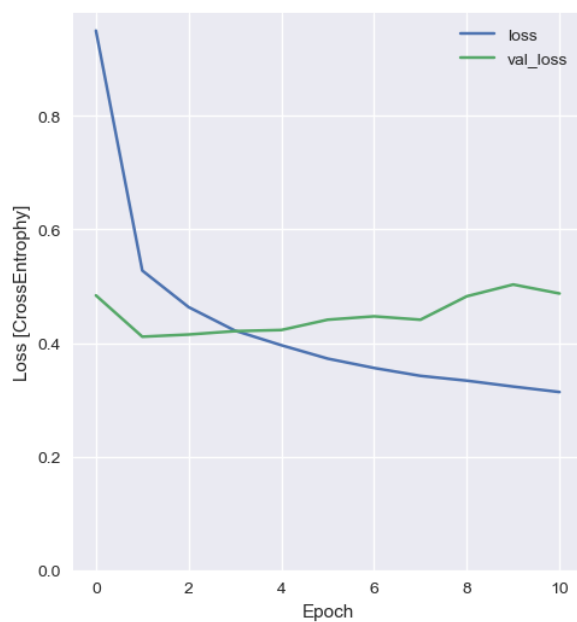
Total params: 488,335
 Trainable params: 488,335
 Non-trainable params: 0



1175/1175 [=====] - 2s 1ms/step - loss: 0.4756 - accuracy: 0.8741

Small v2

Layer (type)	Output Shape	Param #
conv2d_15 (Conv2D)	(None, 28, 28, 32)	320
max_pooling2d_10 (MaxPoolin g2D)	(None, 14, 14, 32)	0
conv2d_16 (Conv2D)	(None, 12, 12, 64)	18496
max_pooling2d_11 (MaxPoolin g2D)	(None, 6, 6, 64)	0
conv2d_17 (Conv2D)	(None, 4, 4, 256)	147712
flatten_5 (Flatten)	(None, 4096)	0
dense_17 (Dense)	(None, 256)	1048832
dense_18 (Dense)	(None, 128)	32896
dropout_9 (Dropout)	(None, 128)	0
dense_19 (Dense)	(None, 64)	8256
dropout_10 (Dropout)	(None, 64)	0
dense_20 (Dense)	(None, 47)	3055
Total params: 1,259,567		
Trainable params: 1,259,567		
Non-trainable params: 0		

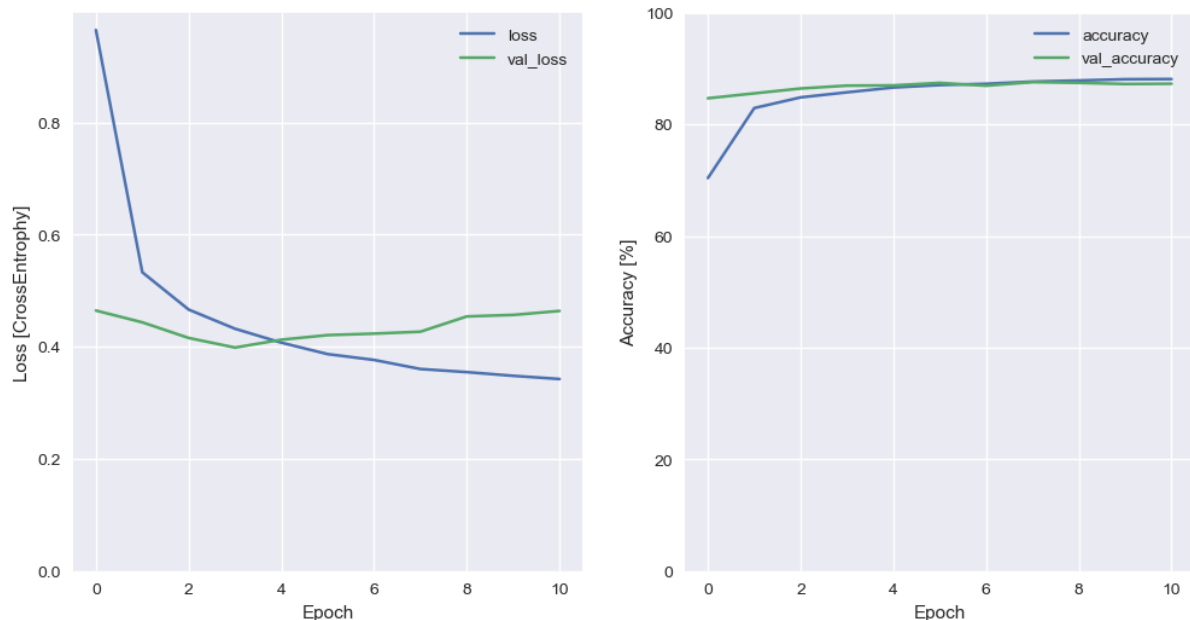


1175/1175 [=====] - 2s 1ms/step - loss: 0.4410 - accuracy: 0.8766

Xs v2

Layer (type)	Output Shape	Param #
conv2d_18 (Conv2D)	(None, 28, 28, 32)	1184
max_pooling2d_12 (MaxPoolin g2D)	(None, 9, 9, 32)	0
conv2d_19 (Conv2D)	(None, 9, 9, 64)	32832
max_pooling2d_13 (MaxPoolin g2D)	(None, 4, 4, 64)	0
conv2d_20 (Conv2D)	(None, 2, 2, 128)	73856
flatten_6 (Flatten)	(None, 512)	0
dense_21 (Dense)	(None, 64)	32832
dense_22 (Dense)	(None, 64)	4160
dropout_11 (Dropout)	(None, 64)	0
dense_23 (Dense)	(None, 47)	3055

Total params: 147,919
Trainable params: 147,919
Non-trainable params: 0

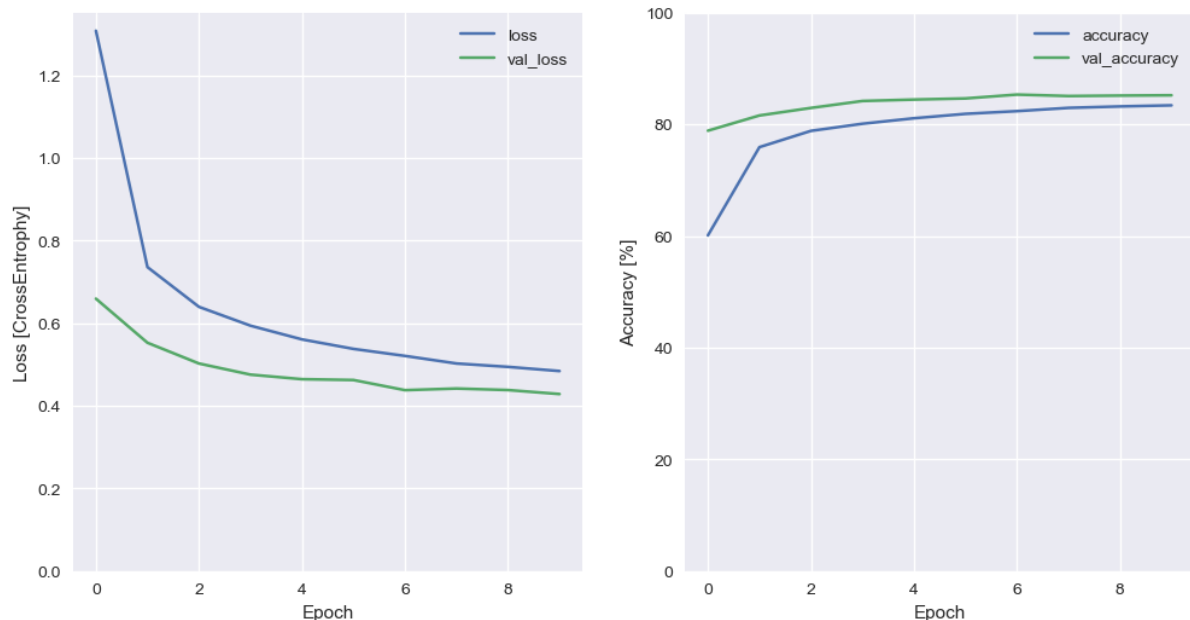


1175/1175 [=====] - 2s 1ms/step - loss: 0.4268 - accuracy: 0.8755

Xxs v2

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 28, 28, 16)	592
max_pooling2d (MaxPooling2D)	(None, 9, 9, 16)	0
conv2d_1 (Conv2D)	(None, 9, 9, 16)	4112
max_pooling2d_1 (MaxPooling2D)	(None, 4, 4, 16)	0
conv2d_2 (Conv2D)	(None, 2, 2, 16)	2320
flatten (Flatten)	(None, 64)	0
dense (Dense)	(None, 47)	3055
dropout (Dropout)	(None, 47)	0
dense_1 (Dense)	(None, 47)	2256

Total params: 12,335
Trainable params: 12,335
Non-trainable params: 0

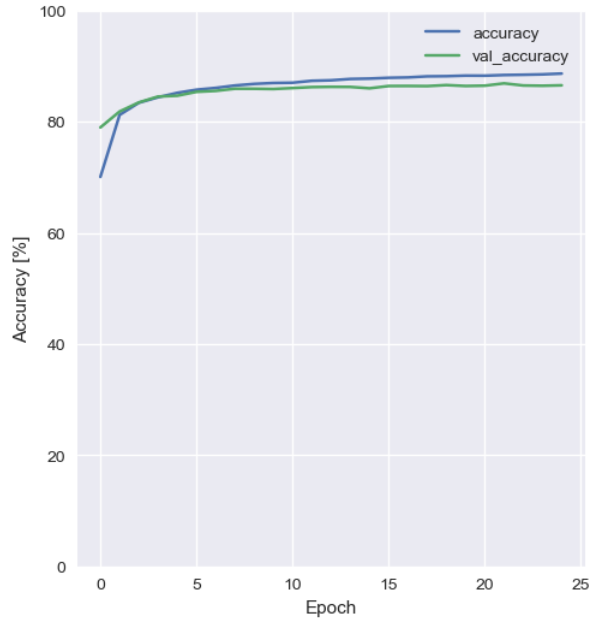
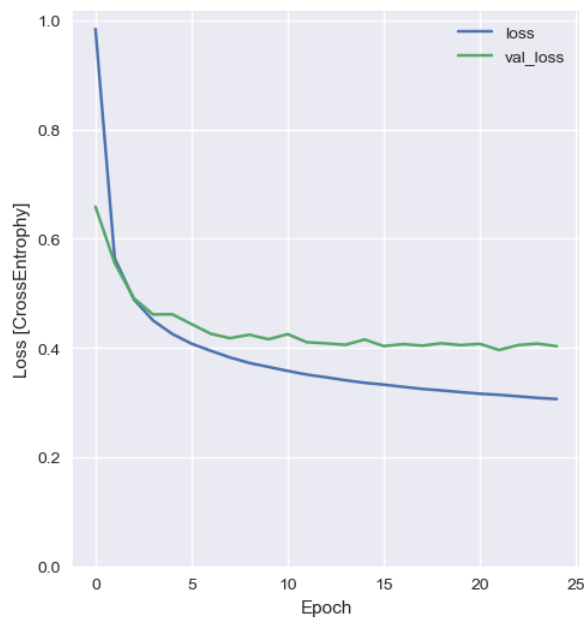


1175/1175 [=====] - 1s 1ms/step - loss: 0.4377 - accuracy: 0.8532

He_normal, 12, xxs

Layer (type)	Output Shape	Param #
conv2d_57 (Conv2D)	(None, 26, 26, 16)	160
max_pooling2d_38 (MaxPoolin g2D)	(None, 13, 13, 16)	0
conv2d_58 (Conv2D)	(None, 11, 11, 16)	2320
max_pooling2d_39 (MaxPoolin g2D)	(None, 5, 5, 16)	0
conv2d_59 (Conv2D)	(None, 3, 3, 16)	2320
flatten_19 (Flatten)	(None, 144)	0
dense_38 (Dense)	(None, 47)	6815
dense_39 (Dense)	(None, 47)	2256

=====
Total params: 13,871
Trainable params: 13,871
Non-trainable params: 0

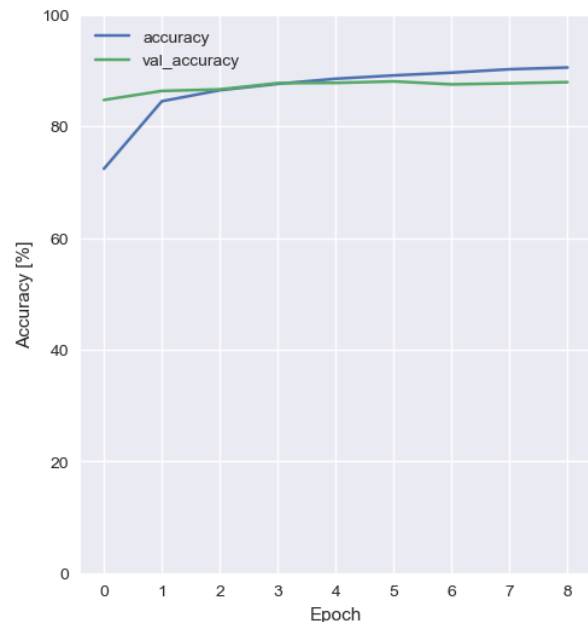
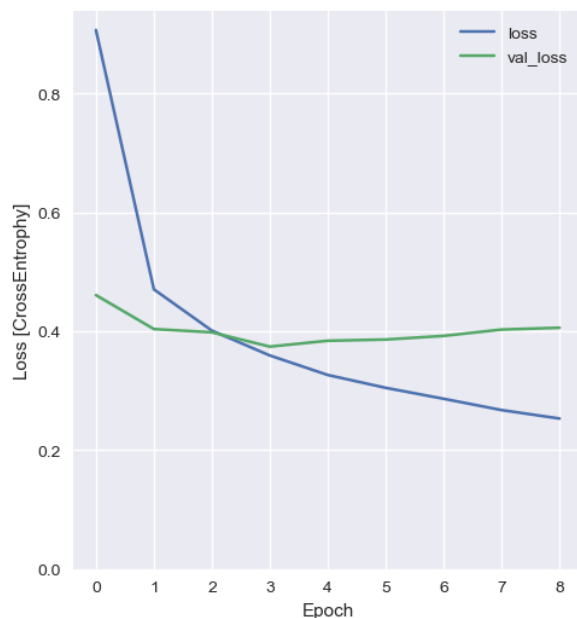


1175/1175 [=====] - 1s 1ms/step - loss: 0.3963 -
accuracy: 0.8689

He_normal, 12, large

Layer (type)	Output Shape	Param #
conv2d_96 (Conv2D)	(None, 26, 26, 32)	320
max_pooling2d_64 (MaxPoolin g2D)	(None, 13, 13, 32)	0
conv2d_97 (Conv2D)	(None, 11, 11, 64)	18496
max_pooling2d_65 (MaxPoolin g2D)	(None, 5, 5, 64)	0
conv2d_98 (Conv2D)	(None, 3, 3, 128)	73856
flatten_32 (Flatten)	(None, 1152)	0
dense_72 (Dense)	(None, 256)	295168
dense_73 (Dense)	(None, 128)	32896
dense_74 (Dense)	(None, 64)	8256
dense_75 (Dense)	(None, 47)	3055

=====
Total params: 432,047
Trainable params: 432,047
Non-trainable params: 0
=====

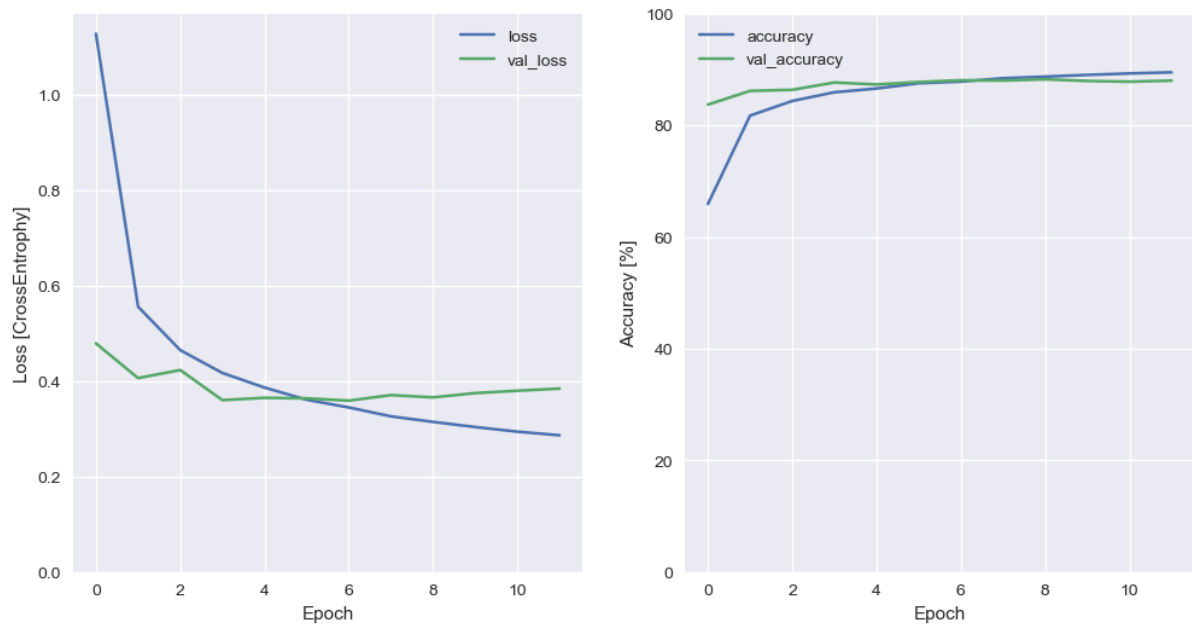


1175/1175 [=====] - 2s 1ms/step - loss: 0.3861 - accuracy: 0.8804

He_normal, 12, xs

Layer (type)	Output Shape	Param #
conv2d_180 (Conv2D)	(None, 28, 28, 32)	1184
max_pooling2d_120 (MaxPooling2D)	(None, 9, 9, 32)	0
conv2d_181 (Conv2D)	(None, 9, 9, 64)	32832
max_pooling2d_121 (MaxPooling2D)	(None, 4, 4, 64)	0
conv2d_182 (Conv2D)	(None, 2, 2, 128)	73856
flatten_60 (Flatten)	(None, 512)	0
dense_180 (Dense)	(None, 64)	32832
dropout_37 (Dropout)	(None, 64)	0
dense_181 (Dense)	(None, 64)	4160
dropout_38 (Dropout)	(None, 64)	0
dense_182 (Dense)	(None, 47)	3055

=====
Total params: 147,919
Trainable params: 147,919
Non-trainable params: 0
=====

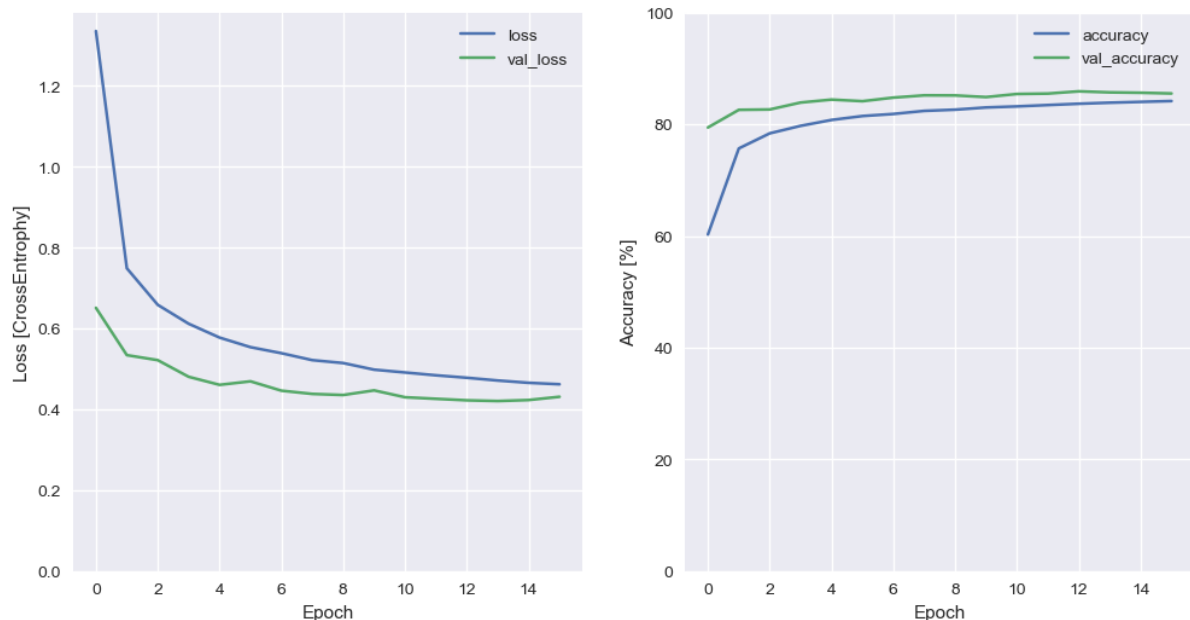


1175/1175 [=====] - 1s 1ms/step - loss: 0.3657 - accuracy: 0.8823

He_normal, xxs

Layer (type)	Output Shape	Param #
conv2d_3 (Conv2D)	(None, 26, 26, 16)	160
max_pooling2d_2 (MaxPooling 2D)	(None, 13, 13, 16)	0
conv2d_4 (Conv2D)	(None, 11, 11, 16)	2320
max_pooling2d_3 (MaxPooling 2D)	(None, 5, 5, 16)	0
conv2d_5 (Conv2D)	(None, 3, 3, 16)	2320
flatten_1 (Flatten)	(None, 144)	0
dense_2 (Dense)	(None, 47)	6815
dropout_1 (Dropout)	(None, 47)	0
dense_3 (Dense)	(None, 47)	2256

Total params: 13,871
Trainable params: 13,871
Non-trainable params: 0



1175/1175 [=====] - 1s 1ms/step - loss: 0.4223 - accuracy: 0.8590