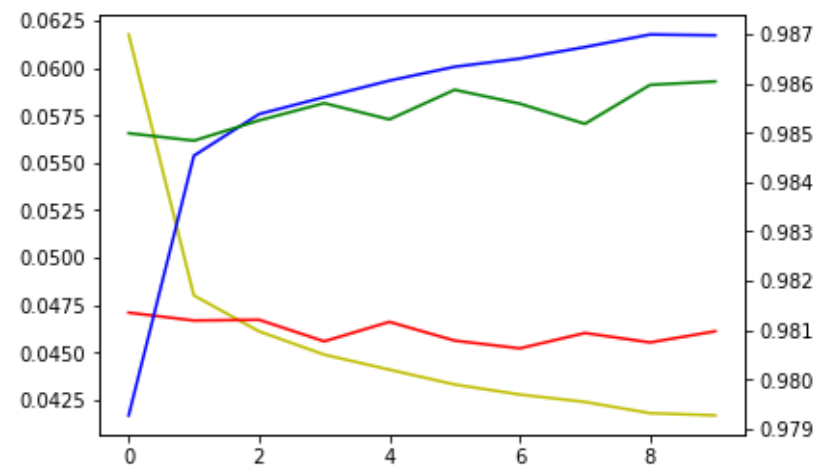


ResNet

× 구조

Layer (type)	Output Shape	Param #	Connected to
input_2 (InputLayer)	(None, 28, 28, 1)	0	
conv2d_2 (Conv2D)	(None, 28, 28, 3)	30	input_2[0][0]
add_1 (Add)	(None, 28, 28, 3)	0	input_2[0][0] conv2d_2[0][0]
flatten_1 (Flatten)	(None, 2352)	0	add_1[0][0]
dense_1 (Dense)	(None, 10)	23530	flatten_1[0][0]

Total params: 23,560
 Trainable params: 23,560
 Non-trainable params: 0



빨강 : Val_loss (0.0461)

노랑 : Loss (0.0417)

녹색 : Val acc (0.9860)

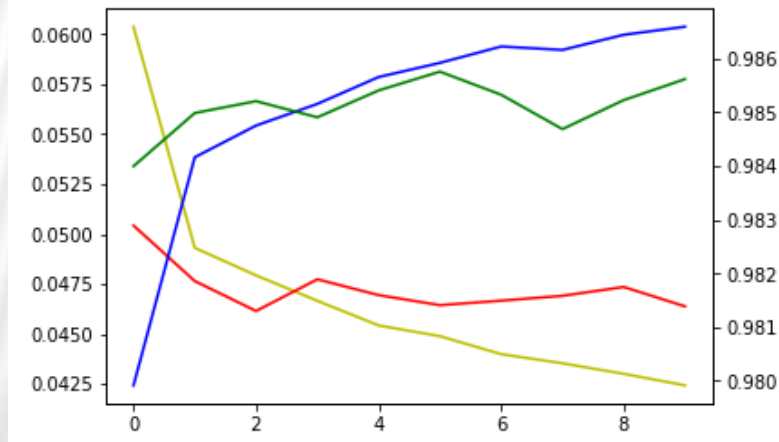
파랑 : acc (0.9870)

연산 시간 120 second

ResNet

× 구조

Layer (type)	Output Shape	Param #	Connected to
input_2 (InputLayer)	(None, 28, 28, 1)	0	
conv2d_3 (Conv2D)	(None, 28, 28, 3)	30	input_2[0] [0]
add_3 (Add)	(None, 28, 28, 3)	0	input_2[0] [0] conv2d_3[0] [0]
conv2d_4 (Conv2D)	(None, 28, 28, 3)	84	add_3[0] [0]
add_4 (Add)	(None, 28, 28, 3)	0	add_3[0] [0] conv2d_4[0] [0]
conv2d_5 (Conv2D)	(None, 28, 28, 3)	84	add_4[0] [0]
add_5 (Add)	(None, 28, 28, 3)	0	add_4[0] [0] conv2d_5[0] [0]
flatten_2 (Flatten)	(None, 2352)	0	add_5[0] [0]
dense_2 (Dense)	(None, 10)	23530	flatten_2[0] [0]
Total params: 23,728			
Trainable params: 23,728			
Non-trainable params: 0			



빨강 : Val_loss 0.0464

노랑 : Loss 0.0424

파랑 : acc 0.9866

녹색 : Val acc 0.9856

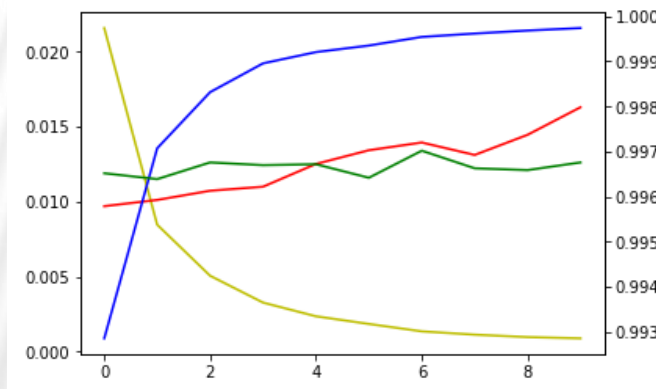
연산 시간 : 370 second

Inception

× 구조

Layer (type)	Output Shape	Param #	Connected to
input_6 (InputLayer)	(None, 28, 28, 1)	0	
conv2d_26 (Conv2D)	(None, 28, 28, 64)	128	input_6[0] [0]
conv2d_28 (Conv2D)	(None, 28, 28, 64)	128	input_6[0] [0]
max_pooling2d_6 (MaxPooling2D)	(None, 28, 28, 1)	0	input_6[0] [0]
conv2d_27 (Conv2D)	(None, 28, 28, 64)	36928	conv2d_26[0] [0]
conv2d_29 (Conv2D)	(None, 28, 28, 64)	102464	conv2d_28[0] [0]
conv2d_30 (Conv2D)	(None, 28, 28, 64)	128	max_pooling2d_6[0] [0]
concatenate_5 (Concatenate)	(None, 84, 28, 64)	0	conv2d_27[0] [0] conv2d_29[0] [0] conv2d_30[0] [0]
flatten_1 (Flatten)	(None, 150528)	0	concatenate_5[0] [0]
dense_2 (Dense)	(None, 10)	1505290	flatten_1[0] [0]

Total params: 1,645,066
Trainable params: 1,645,066
Non-trainable params: 0



빨강 : Val_loss 0.0163
노랑 : Loss 0.0008

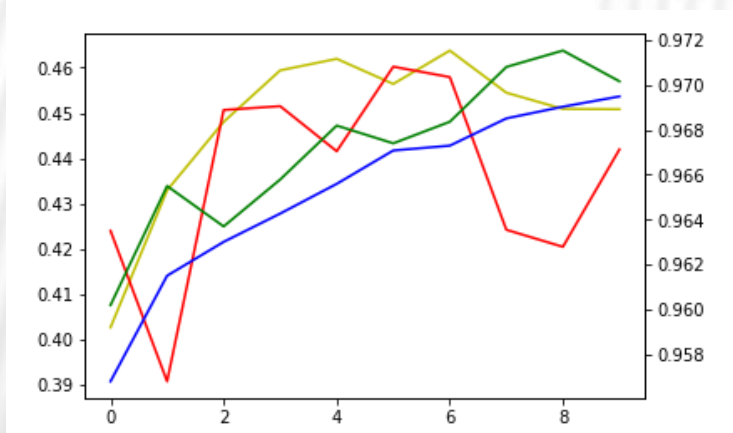
파랑 : acc 0.9997
녹색 : Val acc 0.9968
연산 시간 : 6 hour

Inception

× 구조

Layer (type)	Output Shape	Param #	Connected to
input_13 (InputLayer)	(None, 28, 28, 1)	0	
conv2d_61 (Conv2D)	(None, 28, 28, 64)	128	input_13[0] [0]
max_pooling2d_14 (MaxPooling2D)	(None, 28, 28, 1)	0	input_13[0] [0]
conv2d_62 (Conv2D)	(None, 28, 28, 64)	36928	conv2d_61[0] [0]
conv2d_63 (Conv2D)	(None, 28, 28, 64)	128	max_pooling2d_14[0] [0]
add_35 (Add)	(None, 28, 28, 64)	0	input_13[0] [0] conv2d_62[0] [0]
add_36 (Add)	(None, 28, 28, 64)	0	input_13[0] [0] conv2d_63[0] [0]
concatenate_13 (Concatenate)	(None, 56, 28, 64)	0	add_35[0] [0] add_36[0] [0]
flatten_12 (Flatten)	(None, 100352)	0	concatenate_13[0] [0]
dropout_3 (Dropout)	(None, 100352)	0	flatten_12[0] [0]
dense_4 (Dense)	(None, 10)	1003530	dropout_3[0] [0]

Total params: 1,040,714
Trainable params: 1,040,714
Non-trainable params: 0



빨강 : Val_loss 0.4468

노랑 : Loss 0.4492

파랑 : acc 0.9696

녹색 : Val acc 0.9741

연산 시간 : 4 hour