

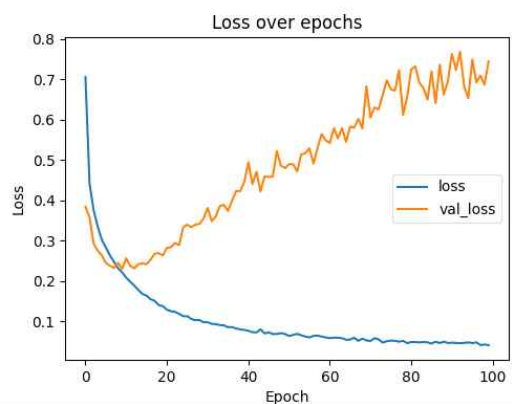
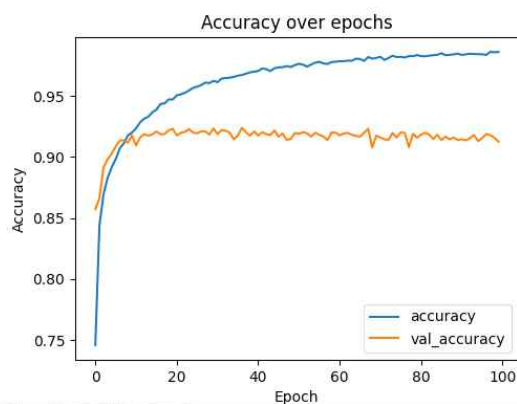
- summary

Model: "sequential"

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 28, 28, 32)	320
max_pooling2d (MaxPooling2D)	(None, 14, 14, 32)	0
conv2d_1 (Conv2D)	(None, 14, 14, 64)	18496
max_pooling2d_1 (MaxPooling2D)	(None, 7, 7, 64)	0
conv2d_2 (Conv2D)	(None, 7, 7, 64)	36928
max_pooling2d_2 (MaxPooling2D)	(None, 3, 3, 64)	0
flatten (Flatten)	(None, 576)	0
dense (Dense)	(None, 64)	36928
dropout (Dropout)	(None, 64)	0
dense_1 (Dense)	(None, 10)	650

=====  
 Total params: 93322 (364.54 KB)  
 Trainable params: 93322 (364.54 KB)  
 Non-trainable params: 0 (0.00 Byte)

- CNN 모델 훈련 그래프 (Epochs : 100)



- Epochs 90~100 로그

```
Epoch 90/100
loss: 0.0473 - accuracy: 0.9837 - val_loss: 0.7627 - val_accuracy: 0.9147
Epoch 91/100
loss: 0.0470 - accuracy: 0.9842 - val_loss: 0.7227 - val_accuracy: 0.9137
Epoch 92/100
loss: 0.0462 - accuracy: 0.9847 - val_loss: 0.7677 - val_accuracy: 0.9155
Epoch 93/100
loss: 0.0470 - accuracy: 0.9844 - val_loss: 0.6824 - val_accuracy: 0.9181
Epoch 94/100
loss: 0.0482 - accuracy: 0.9843 - val_loss: 0.6530 - val_accuracy: 0.9131
Epoch 95/100
loss: 0.0464 - accuracy: 0.9843 - val_loss: 0.7483 - val_accuracy: 0.9155
Epoch 96/100
loss: 0.0483 - accuracy: 0.9837 - val_loss: 0.6918 - val_accuracy: 0.9189
Epoch 97/100
loss: 0.0414 - accuracy: 0.9862 - val_loss: 0.7087 - val_accuracy: 0.9178
Epoch 98/100
loss: 0.0430 - accuracy: 0.9859 - val_loss: 0.6863 - val_accuracy: 0.9158
Epoch 99/100
loss: 0.0412 - accuracy: 0.9861 - val_loss: 0.7448 - val_accuracy: 0.9126
```

- 테스트 데이터 평가

```
313/313 [=====] - 2s 7ms/step - loss: 0.8794 - accuracy: 0.9093
Test loss: 0.8794, Test accuracy: 0.9093
```