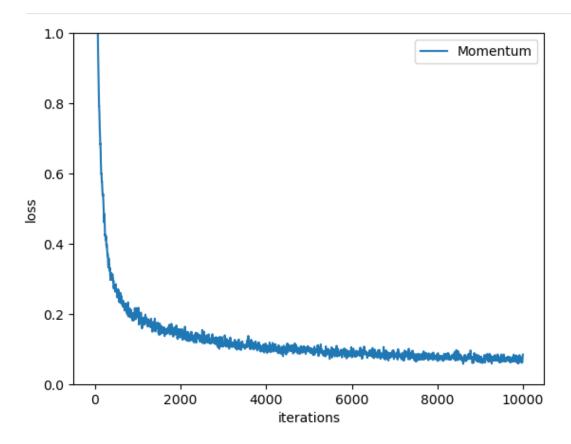
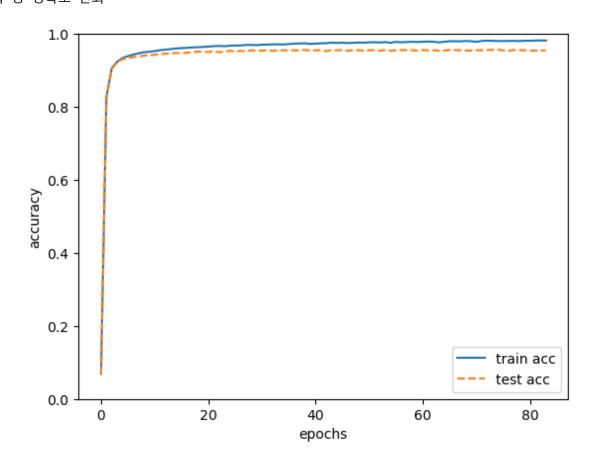
## 반복횟수와 손실함수값 추이 (Momentum



에폭 당 정확도 변화



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신경망 학습 시작 - 신경망: 6층
                                                       47 번째 학습(에폭) --> train_acc : 97.50%, test_acc : 95.39%
1 번째 학습(에폭) --> train_acc : 6.88%, test_acc : 6.83%
2 번째 학습(에폭) --> train_acc : 82.59%, test_acc : 82.69%
                                                        48 번째 학습(에폭) --> train_acc : 97.56%, test_acc : 95.50%
      할습(메폭) --> train acc : 90.62%, test acc :
                                             90.41%
                                                        ᄱᅄᄦ
                                                                학습(에폭) --> train_acc : 97.64%, test_acc : 95.53%
4 번째 학습(에폭) --> train_acc : 92.36%, test_acc :
                                             92.26%
                                                               학습(에폭) --> train_acc : 97.60%, test_acc : 95.38%
                                                        50 번째
5 번째 학습(에폭) --> train_acc : 93.39%, test_acc :
                                             93.09%
                                                        51 번째
                                                               학습(에폭) --> train_acc : 97.68%, test_acc : 95.52%
6 번째 학습(에폭) --> train_acc : 93.88%, test_acc :
                                             93.32%
                                                        52 번째 학습(에폭) --> train_acc : 97.72%, test_acc : 95.55%
7 번째 학습(에폭) --> train_acc : 94.32%, test_acc :
                                             93.62%
8 번째
      학습(에폭) --> train_acc : 94.64%, test_acc :
                                             93.76%
                                                       53 번째
                                                               학습(에폭) --> train_acc : 97.64%, test_acc : 95.40%
9 번째 학습(에폭) --> train_acc : 94.98%, test_acc : 94.06%
                                                        54 번째 학습(에폭) --> train_acc : 97.76%, test_acc : 95.56%
      학습(에폭) --> train_acc : 95.08%, test_acc :
10 버째
                                             94.07%
                                                        55 번째
                                                               학습(에폭) --> train_acc : 97.55%, test_acc : 95.37%
11 번째 학습(에폭) --> train_acc : 95.30%, test_acc :
                                             94.32%
                                                        56 번째
                                                                학습(에폭) --> train_acc : 97.82%, test_acc : 95.52%
12 번째 학습(에폭) --> train_acc : 95.55%, test_acc :
                                             94.45%
                                                        57 번째 학습(에폭) --> train_acc : 97.71%, test_acc : 95.58%
13 번째 학습(에폭) --> train_acc : 95.69%, test_acc :
                                             94.57%
                                                        58 번째
                                                               학습(에폭) --> train_acc : 97.77%, test_acc : 95.57%
14 번째 학습(에폭) --> train_acc : 95.84%, test_acc :
                                             94.61%
15 번째
      학습(에폭) --> train_acc : 96.00%, test_acc :
                                             94.79%
                                                        59 번째 학습(에폭) --> train_acc : 97.85%, test_acc : 95.57%
16 번째 학습(에폭) --> train_acc : 96.09%, test_acc :
                                             94.67%
                                                               학습(에폭) --> train_acc : 97.76%, test_acc : 95.37%
                                                       60 번째
17 번째 학습(에폭) --> train_acc : 96.18%, test_acc : 94.89%
                                                       61 번째 학습(에폭) --> train_acc : 97.85%, test_acc : 95.60%
18 번째 학습(에폭) --> train_acc : 96.28%, test_acc :
19 번째 학습(에폭) --> train_acc : 96.36%, test_acc :
                                             94.90%
                                                       62 번째
                                                                학습(에폭) --> train_acc : 97.91%, test_acc : 95.48%
                                             95.17%
20 번째 학습(에폭) --> train_acc : 96.43%, test_acc :
                                                        63 번째
                                                                학습(에폭) --> train_acc : 97.85%, test_acc : 95.50%
                                             95.10%
21 번째 학습(에폭) --> train_acc : 96.53%, test_acc :
                                                       64 번째 학습(에폭) --> train_acc : 97.68%, test_acc : 95.41%
                                             95.03%
22 번째 학습(에폭) --> train_acc : 96.64%, test_acc :
                                             95.22%
                                                        65 번째
                                                                학습(에폭) --> train_acc : 97.84%, test_acc : 95.44%
23 번째 학습(에폭) --> train_acc : 96.71%, test_acc : 94.98%
                                                       66 번째 학습(에폭) --> train_acc : 97.98%, test_acc : 95.61%
24 번째 학습(에폭) --> train_acc : 96.63%, test_acc : 95.12%
                                                       67 번째
                                                               학습(에폭) --> train_acc : 98.00%, test_acc : 95.56%
25 번째 학습(에폭) --> train_acc : 96.76%, test_acc : 95.41%
                                                        68 번째 학습(에폭) --> train_acc : 97.95%, test_acc : 95.51%
26 번째 학습(에폭) --> train_acc : 96.81%, test_acc : 95.14%
27 번째 학습(에폭) --> train_acc : 96.84%, test_acc : 95.34%
                                                        69 번째
                                                                학습(에폭) --> train_acc : 98.07%, test_acc : 95.44%
28 번째 학습(에폭) --> train_acc : 96.97%, test_acc :
                                             95.23%
                                                        70 번째
                                                                학습(에폭) --> train_acc : 97.99%, test_acc : 95.43%
29 번째 햑습(에폭) --> train_acc : 96.99%, test_acc :
                                             95.53%
                                                        71 번째 학습(에폭) --> train_acc : 97.84%, test_acc : 95.56%
30 번째 학습(에폭) --> train_acc : 96.91%, test_acc :
                                             95.35%
                                                       72 번째 학습(에폭) --> train_acc : 98.06%, test_acc : 95.51%
  번째 학습(에폭) --> train_acc : 97.04%, test_acc :
                                             95.44%
                                                        73 번째 학습(에폭) --> train_acc : 98.16%, test_acc : 95.61%
32 번째 학습(에폭) --> train_acc : 97.07%, test_acc : 95.53%
                                                        74 번째 학습(에폭) --> train_acc : 98.09%, test_acc : 95.62%
33 번째 학습(에폭) --> train_acc : 97.11%, test_acc : 95.34%
34 번째 학습(에폭) --> train_acc : 97.15%, test_acc : 95.48%
                                                       75 번째
                                                                학습(에폭) --> train_acc : 98.07%, test_acc : 95.74%
35 번째 학습(에폭) --> train_acc : 97.10%, test_acc :
                                             95.50%
                                                       76 번째 학습(에폭) --> train_acc : 98.04%, test_acc : 95.44%
36 번째 학습(에폭) --> train_acc : 97.22%, test_acc : 95.49%
                                                        77 번째
                                                               학습(에폭) --> train_acc : 98.07%, test_acc : 95.36%
37 번째 학습(에폭) --> train_acc : 97.31%, test_acc :
                                             95.49%
                                                        78 번째 학습(에폭) --> train_acc : 98.08%, test_acc : 95.60%
38 번째 학습(에폭) --> train_acc : 97.38%, test_acc :
                                             95.50%
39 번째 학습(에폭) --> train_acc : 97.43%, test_acc : 95.65%
                                                       79 번째
                                                               학습(에폭) --> train_acc : 98.03%, test_acc : 95.58%
40 번째 학습(에폭) --> train_acc : 97.25%, test_acc : 95.42%
                                                        80 번째
                                                               학습(에폭) --> train_acc : 98.13%, test_acc : 95.50%
41 번째 학습(에폭) --> train_acc : 97.35%, test_acc : 95.48%
                                                       81 번째 학습(에폭) --> train_acc : 98.11%, test_acc : 95.40%
42 번째 학습(에폭) --> train_acc : 97.41%, test_acc : 95.57%
                                                        82 번째 학습(에폭) --> train_acc : 98.19%, test_acc : 95.43%
43 번째 학습(에폭) --> train_acc : 97.47%, test_acc : 95.26%
                                                       83 번째 학습(에폭) --> train_acc : 98.21%, test_acc : 95.49%
84 번째 학습(에폭) --> train_acc : 98.18%, test_acc : 95.47%
44 번째 학습(에폭) --> train_acc : 97.59%, test_acc : 95.60%
45 번째 학습(에폭) --> train_acc : 97.53%, test_acc : 95.48%
46 번째 학습(에폭) --> train_acc : 97.60%, test_acc : 95.62%
                                                       최종 학습률 --> train_acc : 98.18%, test_acc : 95.47%
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최종 학습률: train\_acc: 98.18%, test\_acc: 95.47