

6.869 MiniPlaces Part 2
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Problem 1

The two adjustments we chose were “Add Weight Decay and Change Learning Rate” and “Change Optimizers”. The top5 errors are shown in the table below, after training for 10 epochs.

| | Val Top 5 Error | Train Top 5 Error |
|-------------------------|-----------------|-------------------|
| Baseline | 0.673 | 0.676 |
| BS=20 | 0.509 | 0.495 |
| BS=20, LR = 1e-2 | 0.332 | 0.154 |
| BS=20, LR = 1e-4 | 0.757 | 0.757 |
| | | |
| BS=20, LR=1e-2, WD=1e-1 | 0.950 | 0.950 |
| BS=20, LR=1e-2, WD=1e-2 | 0.438 | 0.414 |
| BS=20, LR=1e-2, WD=1e-3 | 0.309 | 0.188 |
| | | |
| BS=20, LR=1e-2, Adagrad | 0.278 | 0.126 |

Abbreviations:

BS = batch size

LR = learning rate

WD = weight decay

Problem 2

As listed above, we achieved <30% top5 validation error with BS=20, LR=1e-2, Adagrad.

On the test set:

| | | | |
|---------------------|-------|--------|--------|
| 11/19/2018 13:01:02 | MandB | 0.5896 | 0.2852 |
|---------------------|-------|--------|--------|