

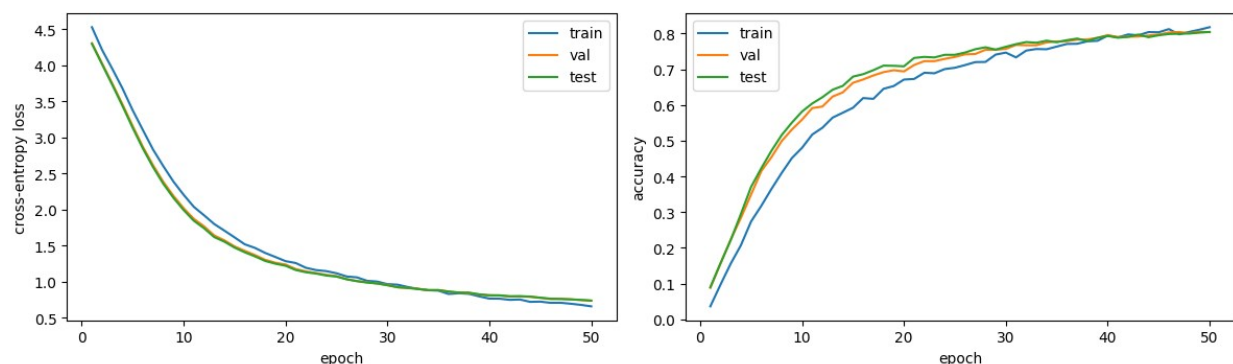
Split sizes (seed=123): train=4094, val=2047, test=2048

[VGG19] repeat seed=123

epoch 01/50	train loss 4.5290 acc 0.0364	val loss 4.3071 acc 0.0884	test loss 4.2994 acc 0.0898
epoch 02/50	train loss 4.2135 acc 0.0972	val loss 4.0267 acc 0.1558	test loss 4.0133 acc 0.1572
epoch 03/50	train loss 3.9520 acc 0.1558	val loss 3.7477 acc 0.2233	test loss 3.7293 acc 0.2217
epoch 04/50	train loss 3.6798 acc 0.2074	val loss 3.4593 acc 0.2838	test loss 3.4371 acc 0.2949
epoch 05/50	train loss 3.3773 acc 0.2738	val loss 3.1594 acc 0.3493	test loss 3.1338 acc 0.3706
epoch 06/50	train loss 3.1033 acc 0.3175	val loss 2.8707 acc 0.4148	test loss 2.8465 acc 0.4229
epoch 07/50	train loss 2.8324 acc 0.3649	val loss 2.6147 acc 0.4538	test loss 2.5884 acc 0.4717
epoch 08/50	train loss 2.6032 acc 0.4096	val loss 2.3855 acc 0.4988	test loss 2.3586 acc 0.5156
epoch 09/50	train loss 2.3881 acc 0.4511	val loss 2.1901 acc 0.5310	test loss 2.1629 acc 0.5503
epoch 10/50	train loss 2.2050 acc 0.4800	val loss 2.0190 acc 0.5589	test loss 1.9931 acc 0.5815
epoch 11/50	train loss 2.0378 acc 0.5171	val loss 1.8714 acc 0.5911	test loss 1.8453 acc 0.6040
epoch 12/50	train loss 1.9213 acc 0.5362	val loss 1.7678 acc 0.5955	test loss 1.7415 acc 0.6216
epoch 13/50	train loss 1.8000 acc 0.5645	val loss 1.6414 acc 0.6234	test loss 1.6184 acc 0.6426
epoch 14/50	train loss 1.7081 acc 0.5782	val loss 1.5735 acc 0.6351	test loss 1.5547 acc 0.6533
epoch 15/50	train loss 1.6143 acc 0.5921	val loss 1.4889 acc 0.6619	test loss 1.4723 acc 0.6792
epoch 16/50	train loss 1.5185 acc 0.6192	val loss 1.4275 acc 0.6712	test loss 1.4073 acc 0.6860
epoch 17/50	train loss 1.4684 acc 0.6170	val loss 1.3692 acc 0.6825	test loss 1.3507 acc 0.6973
epoch 18/50	train loss 1.3988 acc 0.6451	val loss 1.3043 acc 0.6917	test loss 1.2873 acc 0.7100
epoch 19/50	train loss 1.3427 acc 0.6529	val loss 1.2629 acc 0.6971	test loss 1.2492 acc 0.7095
epoch 20/50	train loss 1.2847 acc 0.6710	val loss 1.2385 acc 0.6937	test loss 1.2211 acc 0.7080
epoch 21/50	train loss 1.2589 acc 0.6727	val loss 1.1754 acc 0.7118	test loss 1.1618 acc 0.7314
epoch 22/50	train loss 1.1928 acc 0.6900	val loss 1.1429 acc 0.7225	test loss 1.1306 acc 0.7344
epoch 23/50	train loss 1.1608 acc 0.6886	val loss 1.1198 acc 0.7225	test loss 1.1126 acc 0.7329
epoch 24/50	train loss 1.1462 acc 0.7003	val loss 1.0944 acc 0.7289	test loss 1.0852 acc 0.7402
epoch 25/50	train loss 1.1169 acc 0.7040	val loss 1.0774 acc 0.7342	test loss 1.0705 acc 0.7402
epoch 26/50	train loss 1.0721 acc 0.7115	val loss 1.0354 acc 0.7416	test loss 1.0326 acc 0.7466
epoch 27/50	train loss 1.0600 acc 0.7198	val loss 1.0101 acc 0.7426	test loss 1.0068 acc 0.7559
epoch 28/50	train loss 1.0122 acc 0.7203	val loss 0.9915 acc 0.7543	test loss 0.9876 acc 0.7612
epoch 29/50	train loss 1.0015 acc 0.7408	val loss 0.9744 acc 0.7543	test loss 0.9757 acc 0.7549
epoch 30/50	train loss 0.9661 acc 0.7465	val loss 0.9556 acc 0.7567	test loss 0.9497 acc 0.7627
epoch 31/50	train loss 0.9584 acc 0.7330	val loss 0.9219 acc 0.7680	test loss 0.9239 acc 0.7700
epoch 32/50	train loss 0.9264 acc 0.7521	val loss 0.9128 acc 0.7670	test loss 0.9128 acc 0.7759
epoch 33/50	train loss 0.8993 acc 0.7565	val loss 0.9029 acc 0.7670	test loss 0.8987 acc 0.7739
epoch 34/50	train loss 0.8814 acc 0.7557	val loss 0.8824 acc 0.7748	test loss 0.8832 acc 0.7798
epoch 35/50	train loss 0.8760 acc 0.7633	val loss 0.8828 acc 0.7777	test loss 0.8833 acc 0.7754
epoch 36/50	train loss 0.8298 acc 0.7706	val loss 0.8624 acc 0.7782	test loss 0.8636 acc 0.7812
epoch 37/50	train loss 0.8396 acc 0.7711	val loss 0.8477 acc 0.7826	test loss 0.8494 acc 0.7856
epoch 38/50	train loss 0.8315 acc 0.7780	val loss 0.8434 acc 0.7831	test loss 0.8478 acc 0.7788
epoch 39/50	train loss 0.7964 acc 0.7794	val loss 0.8217 acc 0.7880	test loss 0.8246 acc 0.7876
epoch 40/50	train loss 0.7653 acc 0.7941	val loss 0.8061 acc 0.7953	test loss 0.8131 acc 0.7930
epoch 41/50	train loss 0.7643 acc 0.7890	val loss 0.8073 acc 0.7899	test loss 0.8109 acc 0.7881
epoch 42/50	train loss 0.7482 acc 0.7973	val loss 0.7958 acc 0.7909	test loss 0.7970 acc 0.7905
epoch 43/50	train loss 0.7531 acc 0.7948	val loss 0.7954 acc 0.7914	test loss 0.7992 acc 0.7969
epoch 44/50	train loss 0.7204 acc 0.8039	val loss 0.7893 acc 0.7943	test loss 0.7935 acc 0.7896
epoch 45/50	train loss 0.7235 acc 0.8034	val loss 0.7762 acc 0.7973	test loss 0.7780 acc 0.7949
epoch 46/50	train loss 0.7070 acc 0.8122	val loss 0.7586 acc 0.8026	test loss 0.7641 acc 0.7983
epoch 47/50	train loss 0.7078 acc 0.7975	val loss 0.7597 acc 0.8041	test loss 0.7615 acc 0.7993
epoch 48/50	train loss 0.6940 acc 0.8043	val loss 0.7542 acc 0.8007	test loss 0.7551 acc 0.7998
epoch 49/50	train loss 0.6783 acc 0.8105	val loss 0.7453 acc 0.8051	test loss 0.7471 acc 0.8022
epoch 50/50	train loss 0.6581 acc 0.8175	val loss 0.7375 acc 0.8036	test loss 0.7374 acc 0.8042

Final test loss: 0.7374, test acc: 0.8042

VGG19 (repeat seed=123)



example softmax top-5:

```
class_075: 0.3871
class_018: 0.1595
class_074: 0.1126
class_096: 0.0636
class_063: 0.0610
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