**ResNet18,** training batch size=**128**, testing bs=**128,** optimizer=**SGD, lr=0.02**, **epoch=6**

+ RandomHorizontalFlip() + RandomCrop(32, padding=4)

num of classes: 6

training on cuda:0

epoch 1, loss 0.8597, train acc 0.659, test acc 0.442, time 36.9 sec

epoch 2, loss 0.1085, train acc 0.925, test acc 0.512, time 37.0 sec

epoch 3, loss 0.0356, train acc 0.965, test acc 0.577, time 36.8 sec

epoch 4, loss 0.0198, train acc 0.975, test acc 0.581, time 37.8 sec

epoch 5, loss 0.0124, train acc 0.981, test acc 0.580, time 38.3 sec

epoch 6, loss 0.0090, train acc 0.983, test acc 0.587, time 38.3 sec

Validation: Accuracy of the network: 97.3070516379789 %

OOD accuracy without the "unknown" label: Accuracy of the network: 58.74 %

threshold is 0.00:

Threshold accuracy: 58.920 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3098625894546509

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.302270982170105

threshold is 0.05:

Threshold accuracy: 58.920 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3098625894546509

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.302270982170105

threshold is 0.10:

Threshold accuracy: 58.920 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3098625894546509

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.302270982170105

threshold is 0.15:

Threshold accuracy: 58.920 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3098625894546509

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.302270982170105

threshold is 0.20:

Threshold accuracy: 58.920 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3098625894546509

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.302270982170105

threshold is 0.25:

Threshold accuracy: 58.920 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3098625894546509

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.302270982170105

threshold is 0.30:

Threshold accuracy: 58.920 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3098625894546509

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.302270982170105

threshold is 0.35:

Threshold accuracy: 59.200 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3118983593940735

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.30440946617126463

threshold is 0.40:

Threshold accuracy: 60.110 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3148299491882324

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.30771943588256834

threshold is 0.45:

Threshold accuracy: 61.220 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.317401651763916

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.31056456413269046

threshold is 0.50:

Threshold accuracy: 62.660 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3200090585231781

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.3142942920684814

threshold is 0.55:

Threshold accuracy: 65.090 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.32452531356811526

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.3188433338165283

threshold is 0.60:

Threshold accuracy: 67.220 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3275687759399414

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.3216984603881835

threshold is 0.65:

Threshold accuracy: 69.540 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.32956251792907715

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.32396872634887686

threshold is 0.70:

Threshold accuracy: 71.610 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3310433410644531

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.3252688720703125

threshold is 0.75:

Threshold accuracy: 73.950 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.33200802631378173

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.32645899753570556

threshold is 0.80:

Threshold accuracy: 76.110 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3320665840148926

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.3266329177856445

threshold is 0.85:

Threshold accuracy: 78.970 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3322110489368439

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.32704704113006594

threshold is 0.90:

Threshold accuracy: 81.720 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3317427318572998

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.32653834075927735

threshold is 0.95:

Threshold accuracy: 85.220 %

Brier before calibration: 0.5872943895696336

ECE before calibration: 0.3305896523475647

calibrating...

Brier temperature\_scaling calibration: 0.5724220411969241

ECE temperature\_scaling calibration: 0.3256730873107911