```
D:\Py\Anaconda\envs\tdds\python.exe E:/tqq/Dataset-Pruning-TDDS/evaluate_caliration.py
--------------------
Evaluating on cifar100...
save path : ./cifar100-checkpoint/pruned-dataset/pr_0.3/seed77
{'data_path': './data', 'dataset': 'cifar100', 'batch_size': 128, 'workers': 2, 'pin_memo': False, 'random_seed': 12345, 'arch': 'resnet18', 'checkpoint_path': './cifar100-checkpoint/pruned-dataset/pr_0.3/seed77/model_best.pth.tar', 'subset_rate': 0.3, 'n_bins': 10, 'ngpu': 1, 'use_cuda': True, 'save_path': './cifar100-checkpoint/pruned-dataset/pr_0.3/seed77'}
python version : 3.9.19 (main, May  6 2024, 20:12:36) [MSC v.1916 64 bit (AMD64)]
torch  version : 2.2.1
cudnn  version : 8700
Dataset: cifar100
Data Path: ./data
Random seed (for calibration & testing set split): 12345.
Network: resnet18
Batchsize: 128
N_bins (the number of bins to calculate ECE ): 10.
Evaluating run with seed 77:   0%|          | 0/5 [00:00<?, ?it/s]Files already downloaded and verified
Files already downloaded and verified
Files already downloaded and verified
E:\tqq\Dataset-Pruning-TDDS\evaluate_caliration.py:185: UserWarning: To copy construct from a tensor, it is recommended to use sourceTensor.clone().detach() or sourceTensor.clone().detach().requires_grad_(True), rather than torch.
```

```
18 tensor(sourceTensor).
19   scaled_confidences = torch.tensor(
   bin_accuracies[conf_bin_idx], device=device)
20 tensor(1.0000)
21 tensor(0.0506)
22   **Test** Prec@1 76.311 Prec@5 93.511 Error@
   1 23.689; ECE 0.047
23 **Post-hoc Temperature Scaling (grid search
   range temp 0-15)** ECE after TS: 0.049; Best
   temp tensor([0.9900], device='cuda:0').
24 **Post-hoc Histogram Binning (grid search
   range n_bins 10-20)** ECE after HB: 0.074;
   Best n_bins 14.
25 Evaluating run with seed 77:  20
   %|          | 1/5 [00:26<01:47, 26.85s/it]
   save path : ./cifar100-checkpoint/pruned-
   dataset/pr_0.5/seed77
26 {'data_path': './data', 'dataset': 'cifar100
   ', 'batch_size': 128, 'workers': 2, 'pin_memo
   ': False, 'random_seed': 12345, 'arch': '
   resnet18', 'checkpoint_path': './cifar100-
   checkpoint/pruned-dataset/pr_0.5/seed77/
   model_best.pth.tar', 'subset_rate': 0.5, '
   n_bins': 10, 'ngpu': 1, 'use_cuda': True, '
   save_path': './cifar100-checkpoint/pruned-
   dataset/pr_0.5/seed77', 'num_classes': 100, '
   num_samples': 35000.0}
27 python version : 3.9.19 (main, May  6 2024,
   20:12:36) [MSC v.1916 64 bit (AMD64)]
28 torch  version : 2.2.1
29 cudnn  version : 8700
30 Dataset: cifar100
31 Data Path: ./data
32 Random seed (for calibration & testing set
   split): 12345.
33 Network: resnet18
34 Batchsize: 128
35 N_bins (the number of bins to calculate ECE
```

```
35 ): 10.
36 Loading CIFAR100... Files already downloaded
   and verified
37 Files already downloaded and verified
38 Files already downloaded and verified
39 tensor(1.0000)
40 tensor(0.0327)
41   **Test** Prec@1 73.733 Prec@5 92.144 Error@
   1 26.267; ECE 0.051
42 **Post-hoc Temperature Scaling (grid search
   range temp 0-15)** ECE after TS: 0.053; Best
   temp tensor([0.9400], device='cuda:0').
43 **Post-hoc Histogram Binning (grid search
   range n_bins 10-20)** ECE after HB: 0.083;
   Best n_bins 11.
44 Evaluating run with seed 77:  40
   %|████      | 2/5 [00:52<01:18, 26.12s/it]
   save path : ./cifar100-checkpoint/pruned-
   dataset/pr_0.7/seed77
45 {'data_path': './data', 'dataset': 'cifar100
   ', 'batch_size': 128, 'workers': 2, 'pin_memo
   ': False, 'random_seed': 12345, 'arch': '
   resnet18', 'checkpoint_path': './cifar100-
   checkpoint/pruned-dataset/pr_0.7/seed77/
   model_best.pth.tar', 'subset_rate': 0.7, '
   n_bins': 10, 'ngpu': 1, 'use_cuda': True, '
   save_path': './cifar100-checkpoint/pruned-
   dataset/pr_0.7/seed77', 'num_classes': 100, '
   num_samples': 25000.0}
46 python version : 3.9.19 (main, May  6 2024,
   20:12:36) [MSC v.1916 64 bit (AMD64)]
47 torch  version : 2.2.1
48 cudnn  version : 8700
49 Dataset: cifar100
50 Data Path: ./data
51 Random seed (for calibration & testing set
   split): 12345.
52 Network: resnet18
```

```
Batchsize: 128
N_bins (the number of bins to calculate ECE ): 10.
Loading CIFAR100... Files already downloaded and verified
Files already downloaded and verified
Files already downloaded and verified
tensor(1.0000)
tensor(0.0346)
  **Test** Prec@1 66.567 Prec@5 87.600 Error@1 33.433; ECE 0.056
**Post-hoc Temperature Scaling (grid search range temp 0-15)** ECE after TS: 0.057; Best temp tensor([0.9500], device='cuda:0').
**Post-hoc Histogram Binning (grid search range n_bins 10-20)** ECE after HB: 0.083; Best n_bins 17.
Evaluating run with seed 77:  60%|██████    | 3/5 [01:17<00:50, 25.50s/it]
save path : ./cifar100-checkpoint/pruned-dataset/pr_0.8/seed77
{'data_path': './data', 'dataset': 'cifar100', 'batch_size': 128, 'workers': 2, 'pin_memo': False, 'random_seed': 12345, 'arch': 'resnet18', 'checkpoint_path': './cifar100-checkpoint/pruned-dataset/pr_0.8/seed77/model_best.pth.tar', 'subset_rate': 0.8, 'n_bins': 10, 'ngpu': 1, 'use_cuda': True, 'save_path': './cifar100-checkpoint/pruned-dataset/pr_0.8/seed77', 'num_classes': 100, 'num_samples': 15000.000000000002}
python version : 3.9.19 (main, May  6 2024, 20:12:36) [MSC v.1916 64 bit (AMD64)]
torch  version : 2.2.1
cudnn  version : 8700
Dataset: cifar100
Data Path: ./data
Random seed (for calibration & testing set
```

```
split): 12345.
Network: resnet18
Batchsize: 128
N_bins (the number of bins to calculate ECE
): 10.
Loading CIFAR100... Files already downloaded
 and verified
Files already downloaded and verified
Files already downloaded and verified
tensor(1.0000)
tensor(0.0272)
  **Test** Prec@1 62.789 Prec@5 84.422 Error
@1 37.211; ECE 0.065
**Post-hoc Temperature Scaling (grid search
range temp 0-15)** ECE after TS: 0.062; Best
 temp tensor([0.9200], device='cuda:0').
**Post-hoc Histogram Binning (grid search
range n_bins 10-20)** ECE after HB: 0.066;
Best n_bins 12.
Evaluating run with seed 77:  80
%|████████  | 4/5 [01:41<00:25, 25.11s/it]
save path : ./cifar100-checkpoint/pruned-
dataset/pr_0.9/seed77
{'data_path': './data', 'dataset': 'cifar100
', 'batch_size': 128, 'workers': 2, '
pin_memo': False, 'random_seed': 12345, '
arch': 'resnet18', 'checkpoint_path': './
cifar100-checkpoint/pruned-dataset/pr_0.9/
seed77/model_best.pth.tar', 'subset_rate': 0
.9, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
True, 'save_path': './cifar100-checkpoint/
pruned-dataset/pr_0.9/seed77', 'num_classes
': 100, 'num_samples': 9999.999999999998}
python version : 3.9.19 (main, May  6 2024,
20:12:36) [MSC v.1916 64 bit (AMD64)]
torch  version : 2.2.1
cudnn  version : 8700
Dataset: cifar100
```

```
 88 Data Path: ./data
 89 Random seed (for calibration & testing set
    split): 12345.
 90 Network: resnet18
 91 Batchsize: 128
 92 N_bins (the number of bins to calculate ECE
    ): 10.
 93 Loading CIFAR100... Files already downloaded
     and verified
 94 Files already downloaded and verified
 95 Files already downloaded and verified
 96 tensor(1.0000)
 97 tensor(0.0338)
 98   **Test** Prec@1 52.878 Prec@5 75.267 Error
    @1 47.122; ECE 0.057
 99 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.059; Best
     temp tensor([1.0700], device='cuda:0').
100 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.018;
    Best n_bins 13.
101 save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.3/seed374
102 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.3/
    seed374/model_best.pth.tar', 'subset_rate':
    0.3, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
    True, 'save_path': './cifar100-checkpoint/
    pruned-dataset/pr_0.3/seed374', 'num_classes
    ': 100, 'num_samples': 4999.999999999999}
103 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
104 torch  version : 2.2.1
105 cudnn  version : 8700
106 Dataset: cifar100
```

```
Data Path: ./data
Random seed (for calibration & testing set split): 12345.
Network: resnet18
Batchsize: 128
N_bins (the number of bins to calculate ECE ): 10.
Evaluating run with seed 77: 100%|██████████| 5/5 [02:06<00:00, 25.25s/it]
Evaluating run with seed 374:   0%|          | 0/5 [00:00<?, ?it/s]Files already downloaded and verified
Files already downloaded and verified
Files already downloaded and verified
tensor(1.0000)
tensor(0.0453)
  **Test** Prec@1 76.567 Prec@5 93.800 Error@1 23.433; ECE 0.050
**Post-hoc Temperature Scaling (grid search range temp 0-15)** ECE after TS: 0.056; Best temp tensor([0.9500], device='cuda:0').
**Post-hoc Histogram Binning (grid search range n_bins 10-20)** ECE after HB: 0.082; Best n_bins 11.
save path : ./cifar100-checkpoint/pruned-dataset/pr_0.5/seed374
{'data_path': './data', 'dataset': 'cifar100', 'batch_size': 128, 'workers': 2, 'pin_memo': False, 'random_seed': 12345, 'arch': 'resnet18', 'checkpoint_path': './cifar100-checkpoint/pruned-dataset/pr_0.5/seed374/model_best.pth.tar', 'subset_rate': 0.5, 'n_bins': 10, 'ngpu': 1, 'use_cuda': True, 'save_path': './cifar100-checkpoint/pruned-dataset/pr_0.5/seed374', 'num_classes': 100, 'num_samples': 35000.0}
python version : 3.9.19 (main, May  6 2024, 20:12:36) [MSC v.1916 64 bit (AMD64)]
```

```
124 torch  version : 2.2.1
125 cudnn  version : 8700
126 Dataset: cifar100
127 Data Path: ./data
128 Random seed (for calibration & testing set
    split): 12345.
129 Network: resnet18
130 Batchsize: 128
131 N_bins (the number of bins to calculate ECE
    ): 10.
132 Evaluating run with seed 374:  20
    %|▉         | 1/5 [00:26<01:45, 26.34s/it]
    Files already downloaded and verified
133 Files already downloaded and verified
134 Files already downloaded and verified
135 tensor(1.0000)
136 tensor(0.0347)
137   **Test** Prec@1 73.556 Prec@5 92.111 Error
    @1 26.444; ECE 0.050
138 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.053; Best
     temp tensor([0.9100], device='cuda:0').
139 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.075;
    Best n_bins 10.
140 save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.7/seed374
141 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.7/
    seed374/model_best.pth.tar', 'subset_rate':
    0.7, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
    True, 'save_path': './cifar100-checkpoint/
    pruned-dataset/pr_0.7/seed374', 'num_classes
    ': 100, 'num_samples': 25000.0}
142 python version : 3.9.19 (main, May  6 2024,
```

```
142 20:12:36) [MSC v.1916 64 bit (AMD64)]
143 torch  version : 2.2.1
144 cudnn  version : 8700
145 Dataset: cifar100
146 Data Path: ./data
147 Random seed (for calibration & testing set
    split): 12345.
148 Network: resnet18
149 Batchsize: 128
150 N_bins (the number of bins to calculate ECE
    ): 10.
151 Evaluating run with seed 374:  40
    %|████      | 2/5 [00:47<01:09, 23.19s/it]
    Files already downloaded and verified
152 Files already downloaded and verified
153 Files already downloaded and verified
154 tensor(1.0000)
155 tensor(0.0303)
156 Evaluating run with seed 374:  60
    %|██████    | 3/5 [01:07<00:43, 21.90s/it
    ]  **Test** Prec@1 66.589 Prec@5 87.767
    Error@1 33.411; ECE 0.057
157 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.058; Best
     temp tensor([0.9400], device='cuda:0').
158 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.036;
    Best n_bins 12.
159 save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.8/seed374
160 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.8/
    seed374/model_best.pth.tar', 'subset_rate':
    0.8, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
    True, 'save_path': './cifar100-checkpoint/
```

```
160 pruned-dataset/pr_0.8/seed374', 'num_classes
    ': 100, 'num_samples': 15000.000000000002}
161 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
162 torch  version : 2.2.1
163 cudnn  version : 8700
164 Dataset: cifar100
165 Data Path: ./data
166 Random seed (for calibration & testing set
    split): 12345.
167 Network: resnet18
168 Batchsize: 128
169 N_bins (the number of bins to calculate ECE
    ): 10.
170 Loading CIFAR100... Files already downloaded
     and verified
171 Files already downloaded and verified
172 Files already downloaded and verified
173 tensor(1.0000)
174 tensor(0.0240)
175   **Test** Prec@1 62.511 Prec@5 84.533 Error
    @1 37.489; ECE 0.070
176 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.068; Best
     temp tensor([0.9000], device='cuda:0').
177 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.045;
    Best n_bins 13.
178 save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.9/seed374
179 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.9/
    seed374/model_best.pth.tar', 'subset_rate':
    0.9, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
    True, 'save_path': './cifar100-checkpoint/
```

```
179 pruned-dataset/pr_0.9/seed374', 'num_classes
    ': 100, 'num_samples': 9999.999999999998}
180 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
181 torch  version : 2.2.1
182 cudnn  version : 8700
183 Dataset: cifar100
184 Data Path: ./data
185 Random seed (for calibration & testing set
    split): 12345.
186 Network: resnet18
187 Batchsize: 128
188 N_bins (the number of bins to calculate ECE
    ): 10.
189 Evaluating run with seed 374:  80
    %|████████  | 4/5 [01:27<00:21, 21.26s/it]
    Files already downloaded and verified
190 Files already downloaded and verified
191 Files already downloaded and verified
192 tensor(1.0000)
193 tensor(0.0265)
194   **Test** Prec@1 52.111 Prec@5 75.556 Error
    @1 47.889; ECE 0.059
195 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.059; Best
     temp tensor([1.], device='cuda:0').
196 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.036;
    Best n_bins 17.
197 Evaluating run with seed 374: 100
    %|██████████| 5/5 [01:47<00:00, 21.54s/it]
198 Evaluating run with seed 565:   0
    %|          | 0/5 [00:00<?, ?it/s]save path
     : ./cifar100-checkpoint/pruned-dataset/pr_0
    .3/seed565
199 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
```

```
199 arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.3/
    seed565/model_best.pth.tar', 'subset_rate':
    0.3, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
    True, 'save_path': './cifar100-checkpoint/
    pruned-dataset/pr_0.3/seed565', 'num_classes
    ': 100, 'num_samples': 4999.999999999999}
200 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
201 torch  version : 2.2.1
202 cudnn  version : 8700
203 Dataset: cifar100
204 Data Path: ./data
205 Random seed (for calibration & testing set
    split): 12345.
206 Network: resnet18
207 Batchsize: 128
208 N_bins (the number of bins to calculate ECE
    ): 10.
209 Loading CIFAR100... Files already downloaded
     and verified
210 Files already downloaded and verified
211 Files already downloaded and verified
212 E:\tqq\Dataset-Pruning-TDDS\
    evaluate_caliration.py:232: RuntimeWarning:
    More than 20 figures have been opened.
    Figures created through the pyplot interface
     (`matplotlib.pyplot.figure`) are retained
    until explicitly closed and may consume too
    much memory. (To control this warning, see
    the rcParam `figure.max_open_warning`).
    Consider using `matplotlib.pyplot.close()`.
213   plt.figure(figsize=(6,6))
214 tensor(1.0000)
215 tensor(0.0523)
216 Evaluating run with seed 565:  20
    %|          | 1/5 [00:20<01:23, 20.89s/it
    ]  **Test** Prec@1 76.744 Prec@5 94.100
```

```
Error@1 23.256; ECE 0.044
**Post-hoc Temperature Scaling (grid search range temp 0-15)** ECE after TS: 0.044; Best temp tensor([1.], device='cuda:0').
**Post-hoc Histogram Binning (grid search range n_bins 10-20)** ECE after HB: 0.112; Best n_bins 11.
save path : ./cifar100-checkpoint/pruned-dataset/pr_0.5/seed565
{'data_path': './data', 'dataset': 'cifar100', 'batch_size': 128, 'workers': 2, 'pin_memo': False, 'random_seed': 12345, 'arch': 'resnet18', 'checkpoint_path': './cifar100-checkpoint/pruned-dataset/pr_0.5/seed565/model_best.pth.tar', 'subset_rate': 0.5, 'n_bins': 10, 'ngpu': 1, 'use_cuda': True, 'save_path': './cifar100-checkpoint/pruned-dataset/pr_0.5/seed565', 'num_classes': 100, 'num_samples': 35000.0}
python version : 3.9.19 (main, May  6 2024, 20:12:36) [MSC v.1916 64 bit (AMD64)]
torch  version : 2.2.1
cudnn  version : 8700
Dataset: cifar100
Data Path: ./data
Random seed (for calibration & testing set split): 12345.
Network: resnet18
Batchsize: 128
N_bins (the number of bins to calculate ECE ): 10.
Loading CIFAR100... Files already downloaded and verified
Files already downloaded and verified
Files already downloaded and verified
tensor(1.0000)
tensor(0.0325)
  **Test** Prec@1 73.222 Prec@5 92.167 Error
```

```
235 @1 26.778; ECE 0.050
236 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.050; Best
     temp tensor([0.9400], device='cuda:0').
237 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.068;
    Best n_bins 11.
238 Evaluating run with seed 565:  40
    %|████      | 2/5 [00:41<01:01, 20.64s/it]
    save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.7/seed565
239 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.7/
    seed565/model_best.pth.tar', 'subset_rate':
    0.7, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
    True, 'save_path': './cifar100-checkpoint/
    pruned-dataset/pr_0.7/seed565', 'num_classes
    ': 100, 'num_samples': 25000.0}
240 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
241 torch  version : 2.2.1
242 cudnn  version : 8700
243 Dataset: cifar100
244 Data Path: ./data
245 Random seed (for calibration & testing set
    split): 12345.
246 Network: resnet18
247 Batchsize: 128
248 N_bins (the number of bins to calculate ECE
    ): 10.
249 Loading CIFAR100... Files already downloaded
     and verified
250 Files already downloaded and verified
251 Files already downloaded and verified
252 tensor(1.0000)
```

```
253 tensor(0.0327)
254   **Test** Prec@1 66.433 Prec@5 87.900 Error
    @1 33.567; ECE 0.059
255 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.060; Best
     temp tensor([0.9800], device='cuda:0').
256 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.071;
    Best n_bins 12.
257 Evaluating run with seed 565:  60
    %|██████    | 3/5 [01:01<00:40, 20.25s/it]
    save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.8/seed565
258 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.8/
    seed565/model_best.pth.tar', 'subset_rate':
    0.8, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
    True, 'save_path': './cifar100-checkpoint/
    pruned-dataset/pr_0.8/seed565', 'num_classes
    ': 100, 'num_samples': 15000.000000000002}
259 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
260 torch  version : 2.2.1
261 cudnn  version : 8700
262 Dataset: cifar100
263 Data Path: ./data
264 Random seed (for calibration & testing set
    split): 12345.
265 Network: resnet18
266 Batchsize: 128
267 N_bins (the number of bins to calculate ECE
    ): 10.
268 Loading CIFAR100... Files already downloaded
     and verified
269 Files already downloaded and verified
```

```
Files already downloaded and verified
tensor(1.0000)
tensor(0.0277)
  **Test** Prec@1 62.989 Prec@5 84.744 Error@1 37.011; ECE 0.065
**Post-hoc Temperature Scaling (grid search range temp 0-15)** ECE after TS: 0.060; Best temp tensor([0.9500], device='cuda:0').
**Post-hoc Histogram Binning (grid search range n_bins 10-20)** ECE after HB: 0.026; Best n_bins 15.
Evaluating run with seed 565:  80%|████████  | 4/5 [01:20<00:20, 20.00s/it]
save path : ./cifar100-checkpoint/pruned-dataset/pr_0.9/seed565
{'data_path': './data', 'dataset': 'cifar100', 'batch_size': 128, 'workers': 2, 'pin_memo': False, 'random_seed': 12345, 'arch': 'resnet18', 'checkpoint_path': './cifar100-checkpoint/pruned-dataset/pr_0.9/seed565/model_best.pth.tar', 'subset_rate': 0.9, 'n_bins': 10, 'ngpu': 1, 'use_cuda': True, 'save_path': './cifar100-checkpoint/pruned-dataset/pr_0.9/seed565', 'num_classes': 100, 'num_samples': 9999.999999999998}
python version : 3.9.19 (main, May  6 2024, 20:12:36) [MSC v.1916 64 bit (AMD64)]
torch  version : 2.2.1
cudnn  version : 8700
Dataset: cifar100
Data Path: ./data
Random seed (for calibration & testing set split): 12345.
Network: resnet18
Batchsize: 128
N_bins (the number of bins to calculate ECE ): 10.
Loading CIFAR100... Files already downloaded
```

```
287  and verified
288 Files already downloaded and verified
289 Files already downloaded and verified
290 tensor(1.0000)
291 tensor(0.0362)
292   **Test** Prec@1 51.833 Prec@5 75.100 Error
    @1 48.167; ECE 0.058
293 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.055; Best
     temp tensor([1.0300], device='cuda:0').
294 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.020;
    Best n_bins 14.
295 save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.3/seed886
296 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.3/
    seed886/model_best.pth.tar', 'subset_rate':
    0.3, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
    True, 'save_path': './cifar100-checkpoint/
    pruned-dataset/pr_0.3/seed886', 'num_classes
    ': 100, 'num_samples': 4999.999999999999}
297 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
298 torch  version : 2.2.1
299 cudnn  version : 8700
300 Dataset: cifar100
301 Data Path: ./data
302 Random seed (for calibration & testing set
    split): 12345.
303 Network: resnet18
304 Batchsize: 128
305 N_bins (the number of bins to calculate ECE
    ): 10.
306 Evaluating run with seed 565: 100
```

```
306 %|██████████| 5/5 [01:40<00:00, 20.03s/it]
307 Evaluating run with seed 886:   0
    %|          | 0/5 [00:00<?, ?it/s]Files
    already downloaded and verified
308 Files already downloaded and verified
309 Files already downloaded and verified
310 tensor(1.0000)
311 tensor(0.0494)
312 Evaluating run with seed 886:  20
    %|▉         | 1/5 [00:20<01:23, 20.90s/it
    ]  **Test** Prec@1 76.922 Prec@5 93.822
    Error@1 23.078; ECE 0.047
313 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.049; Best
     temp tensor([0.9900], device='cuda:0').
314 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.078;
    Best n_bins 15.
315 save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.5/seed886
316 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.5/
    seed886/model_best.pth.tar', 'subset_rate':
    0.5, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
    True, 'save_path': './cifar100-checkpoint/
    pruned-dataset/pr_0.5/seed886', 'num_classes
    ': 100, 'num_samples': 35000.0}
317 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
318 torch  version : 2.2.1
319 cudnn  version : 8700
320 Dataset: cifar100
321 Data Path: ./data
322 Random seed (for calibration & testing set
    split): 12345.
```

```
323 Network: resnet18
324 Batchsize: 128
325 N_bins (the number of bins to calculate ECE
    ): 10.
326 Loading CIFAR100... Files already downloaded
     and verified
327 Files already downloaded and verified
328 Files already downloaded and verified
329 tensor(1.0000)
330 tensor(0.0328)
331 Evaluating run with seed 886:  40
    %|████      | 2/5 [00:41<01:01, 20.60s/it
    ]  **Test** Prec@1 73.656 Prec@5 92.078
    Error@1 26.344; ECE 0.054
332 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.055; Best
     temp tensor([0.9700], device='cuda:0').
333 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.070;
    Best n_bins 14.
334 save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.7/seed886
335 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.7/
    seed886/model_best.pth.tar', 'subset_rate':
    0.7, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
    True, 'save_path': './cifar100-checkpoint/
    pruned-dataset/pr_0.7/seed886', 'num_classes
    ': 100, 'num_samples': 25000.0}
336 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
337 torch  version : 2.2.1
338 cudnn  version : 8700
339 Dataset: cifar100
340 Data Path: ./data
```

```
341 Random seed (for calibration & testing set
    split): 12345.
342 Network: resnet18
343 Batchsize: 128
344 N_bins (the number of bins to calculate ECE
    ): 10.
345 Loading CIFAR100... Files already downloaded
     and verified
346 Files already downloaded and verified
347 Files already downloaded and verified
348 tensor(1.0000)
349 tensor(0.0296)
350   **Test** Prec@1 67.022 Prec@5 87.933 Error
    @1 32.978; ECE 0.064
351 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.064; Best
     temp tensor([0.9900], device='cuda:0').
352 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.051;
    Best n_bins 11.
353 save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.8/seed886
354 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.8/
    seed886/model_best.pth.tar', 'subset_rate':
    0.8, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
    True, 'save_path': './cifar100-checkpoint/
    pruned-dataset/pr_0.8/seed886', 'num_classes
    ': 100, 'num_samples': 15000.000000000002}
355 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
356 torch  version : 2.2.1
357 cudnn  version : 8700
358 Dataset: cifar100
359 Data Path: ./data
```

```
360 Random seed (for calibration & testing set
    split): 12345.
361 Network: resnet18
362 Batchsize: 128
363 N_bins (the number of bins to calculate ECE
    ): 10.
364 Evaluating run with seed 886:  60
    %|██████    | 3/5 [01:01<00:40, 20.25s/it]
    Files already downloaded and verified
365 Files already downloaded and verified
366 Files already downloaded and verified
367 tensor(1.0000)
368 tensor(0.0293)
369   **Test** Prec@1 63.311 Prec@5 84.311 Error
    @1 36.689; ECE 0.080
370 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.071; Best
     temp tensor([0.9300], device='cuda:0').
371 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.037;
    Best n_bins 13.
372 save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.9/seed886
373 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.9/
    seed886/model_best.pth.tar', 'subset_rate':
    0.9, 'n_bins': 10, 'ngpu': 1, 'use_cuda':
    True, 'save_path': './cifar100-checkpoint/
    pruned-dataset/pr_0.9/seed886', 'num_classes
    ': 100, 'num_samples': 9999.999999999998}
374 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
375 torch  version : 2.2.1
376 cudnn  version : 8700
377 Dataset: cifar100
```

```
Data Path: ./data
Random seed (for calibration & testing set split): 12345.
Network: resnet18
Batchsize: 128
N_bins (the number of bins to calculate ECE ): 10.
Evaluating run with seed 886:  80
%|          | 4/5 [01:20<00:20, 20.04s/it]
Files already downloaded and verified
Files already downloaded and verified
Files already downloaded and verified
tensor(1.0000)
tensor(0.0316)
  **Test** Prec@1 53.067 Prec@5 75.189 Error@1 46.933; ECE 0.053
**Post-hoc Temperature Scaling (grid search range temp 0-15)** ECE after TS: 0.055; Best temp tensor([1.0400], device='cuda:0').
**Post-hoc Histogram Binning (grid search range n_bins 10-20)** ECE after HB: 0.018; Best n_bins 13.
Evaluating run with seed 886: 100
%|          | 5/5 [01:40<00:00, 20.07s/it]
Evaluating run with seed 4233:   0
%|          | 0/5 [00:00<?, ?it/s]save path : ./cifar100-checkpoint/pruned-dataset/pr_0.3/seed4233
{'data_path': './data', 'dataset': 'cifar100', 'batch_size': 128, 'workers': 2, 'pin_memo': False, 'random_seed': 12345, 'arch': 'resnet18', 'checkpoint_path': './cifar100-checkpoint/pruned-dataset/pr_0.3/seed4233/model_best.pth.tar', 'subset_rate': 0.3, 'n_bins': 10, 'ngpu': 1, 'use_cuda': True, 'save_path': './cifar100-checkpoint/pruned-dataset/pr_0.3/seed4233', 'num_classes': 100, 'num_samples': 4999.
```

```
393 999999999999}
394 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
395 torch  version : 2.2.1
396 cudnn  version : 8700
397 Dataset: cifar100
398 Data Path: ./data
399 Random seed (for calibration & testing set
    split): 12345.
400 Network: resnet18
401 Batchsize: 128
402 N_bins (the number of bins to calculate ECE
    ): 10.
403 Loading CIFAR100... Files already downloaded
     and verified
404 Files already downloaded and verified
405 Files already downloaded and verified
406 tensor(1.0000)
407 tensor(0.0453)
408   **Test** Prec@1 76.467 Prec@5 93.956 Error
    @1 23.533; ECE 0.048
409 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.047; Best
     temp tensor([1.0100], device='cuda:0').
410 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.096;
    Best n_bins 11.
411 Evaluating run with seed 4233:  20
    %|          | 1/5 [00:21<01:24, 21.11s/it]
    save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.5/seed4233
412 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.5/
    seed4233/model_best.pth.tar', 'subset_rate
    ': 0.5, 'n_bins': 10, 'ngpu': 1, 'use_cuda
```

```
412 ': True, 'save_path': './cifar100-checkpoint
    /pruned-dataset/pr_0.5/seed4233', '
    num_classes': 100, 'num_samples': 35000.0}
413 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
414 torch  version : 2.2.1
415 cudnn  version : 8700
416 Dataset: cifar100
417 Data Path: ./data
418 Random seed (for calibration & testing set
    split): 12345.
419 Network: resnet18
420 Batchsize: 128
421 N_bins (the number of bins to calculate ECE
    ): 10.
422 Loading CIFAR100... Files already downloaded
     and verified
423 Files already downloaded and verified
424 Files already downloaded and verified
425 tensor(1.0000)
426 tensor(0.0324)
427   **Test** Prec@1 73.633 Prec@5 92.033 Error
    @1 26.367; ECE 0.054
428 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.068; Best
     temp tensor([0.8300], device='cuda:0').
429 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.062;
    Best n_bins 17.
430 save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.7/seed4233
431 {'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.7/
    seed4233/model_best.pth.tar', 'subset_rate
    ': 0.7, 'n_bins': 10, 'ngpu': 1, 'use_cuda
```

```
': True, 'save_path': './cifar100-checkpoint
    /pruned-dataset/pr_0.7/seed4233', '
    num_classes': 100, 'num_samples': 25000.0}
python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
torch  version : 2.2.1
cudnn  version : 8700
Dataset: cifar100
Data Path: ./data
Random seed (for calibration & testing set
    split): 12345.
Network: resnet18
Batchsize: 128
N_bins (the number of bins to calculate ECE
    ): 10.
Evaluating run with seed 4233:  40
    %|████      | 2/5 [00:41<01:02, 20.79s/it]
    Files already downloaded and verified
Files already downloaded and verified
Files already downloaded and verified
tensor(1.0000)
tensor(0.0289)
  **Test** Prec@1 67.533 Prec@5 87.878 Error
    @1 32.467; ECE 0.064
**Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.060; Best
     temp tensor([0.9200], device='cuda:0').
**Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.065;
    Best n_bins 12.
save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.8/seed4233
{'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
    cifar100-checkpoint/pruned-dataset/pr_0.8/
    seed4233/model_best.pth.tar', 'subset_rate
```

```
': 0.8, 'n_bins': 10, 'ngpu': 1, 'use_cuda
    ': True, 'save_path': './cifar100-checkpoint
    /pruned-dataset/pr_0.8/seed4233', '
    num_classes': 100, 'num_samples': 15000.
    000000000002}
python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
torch  version : 2.2.1
cudnn  version : 8700
Dataset: cifar100
Data Path: ./data
Random seed (for calibration & testing set
    split): 12345.
Network: resnet18
Batchsize: 128
N_bins (the number of bins to calculate ECE
    ): 10.
Evaluating run with seed 4233:  60
    %|██████    | 3/5 [01:02<00:41, 20.65s/it]
    Files already downloaded and verified
Files already downloaded and verified
Files already downloaded and verified
tensor(1.0000)
tensor(0.0222)
  **Test** Prec@1 62.800 Prec@5 83.944 Error
    @1 37.200; ECE 0.069
**Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.070; Best
     temp tensor([0.9500], device='cuda:0').
**Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.059;
    Best n_bins 17.
save path : ./cifar100-checkpoint/pruned-
    dataset/pr_0.9/seed4233
{'data_path': './data', 'dataset': 'cifar100
    ', 'batch_size': 128, 'workers': 2, '
    pin_memo': False, 'random_seed': 12345, '
    arch': 'resnet18', 'checkpoint_path': './
```

```
469 cifar100-checkpoint/pruned-dataset/pr_0.9/
    seed4233/model_best.pth.tar', 'subset_rate
    ': 0.9, 'n_bins': 10, 'ngpu': 1, 'use_cuda
    ': True, 'save_path': './cifar100-checkpoint
    /pruned-dataset/pr_0.9/seed4233', '
    num_classes': 100, 'num_samples': 9999.
    999999999998}
470 python version : 3.9.19 (main, May  6 2024,
    20:12:36) [MSC v.1916 64 bit (AMD64)]
471 torch  version : 2.2.1
472 cudnn  version : 8700
473 Dataset: cifar100
474 Data Path: ./data
475 Random seed (for calibration & testing set
    split): 12345.
476 Network: resnet18
477 Batchsize: 128
478 N_bins (the number of bins to calculate ECE
    ): 10.
479 Evaluating run with seed 4233:  80
    %|          | 4/5 [01:22<00:20, 20.55s/it]
    Files already downloaded and verified
480 Files already downloaded and verified
481 Files already downloaded and verified
482 tensor(1.0000)
483 tensor(0.0329)
484 Evaluating run with seed 4233: 100
    %|          | 5/5 [01:42<00:00, 20.55s/it]
485   **Test** Prec@1 52.822 Prec@5 75.811 Error
    @1 47.178; ECE 0.061
486 **Post-hoc Temperature Scaling (grid search
    range temp 0-15)** ECE after TS: 0.058; Best
     temp tensor([1.0600], device='cuda:0').
487 **Post-hoc Histogram Binning (grid search
    range n_bins 10-20)** ECE after HB: 0.017;
    Best n_bins 15.
488
489 Process finished with exit code 0
```