

7b pretrain acc: **0.3297**

```
root@e8e99ab71e21: ~/W
Probabilities for choices: {'A': 0.408203125, 'B': 0.386474609375, 'C': 0.205322265625}
Predicted Label: A, True Label: C
Evaluating MNLI: 100% | 2992/3000 [16:44<00:02, 3.22it/s]
Probabilities for choices: {'A': 0.41064453125, 'B': 0.379638671875, 'C': 0.209716796875}
Predicted Label: A, True Label: B
Evaluating MNLI: 100% | 2993/3000 [16:44<00:02, 3.14it/s]
Probabilities for choices: {'A': 0.426025390625, 'B': 0.37890625, 'C': 0.195068359375}
Predicted Label: A, True Label: A
Evaluating MNLI: 100% | 2994/3000 [16:44<00:01, 3.09it/s]
Probabilities for choices: {'A': 0.38427734375, 'B': 0.36962890625, 'C': 0.2462158203125}
Predicted Label: A, True Label: C
Evaluating MNLI: 100% | 2995/3000 [16:45<00:01, 3.02it/s]
Probabilities for choices: {'A': 0.44140625, 'B': 0.37451171875, 'C': 0.1839599609375}
Predicted Label: A, True Label: A
Evaluating MNLI: 100% | 2996/3000 [16:45<00:01, 2.98it/s]
Probabilities for choices: {'A': 0.421142578125, 'B': 0.351806640625, 'C': 0.2271728515625}
Predicted Label: A, True Label: B
Evaluating MNLI: 100% | 2997/3000 [16:45<00:01, 2.98it/s]
Probabilities for choices: {'A': 0.415283203125, 'B': 0.396240234375, 'C': 0.1885986328125}
Predicted Label: A, True Label: A
Evaluating MNLI: 100% | 2998/3000 [16:46<00:00, 2.97it/s]
Probabilities for choices: {'A': 0.435302734375, 'B': 0.3388671875, 'C': 0.225830078125}
Predicted Label: A, True Label: A
Evaluating MNLI: 100% | 2999/3000 [16:46<00:00, 2.96it/s]
Probabilities for choices: {'A': 0.41943359375, 'B': 0.373046875, 'C': 0.2076416015625}
Predicted Label: A, True Label: A
Evaluating MNLI: 100% | 3000/3000 [16:46<00:00, 2.98it/s]
Evaluation completed. Accuracy: 0.3297 (989/3000)
Logits saved!
(base) root@e8e99ab71e21:~/Workspace/SF_CPT/MNLI#
```

13b pretrain acc: **0.4067**

```
root@e8e99ab71e21: ~/Work
Probabilities for choices: {'A': 0.447265625, 'B': 0.22314453125, 'C': 0.329833984375}
Predicted Label: A, True Label: C
Evaluating MNLI: 100% | 2992/3000 [33:14<00:04, 1.68it/s]
Probabilities for choices: {'A': 0.39208984375, 'B': 0.251220703125, 'C': 0.35693359375}
Predicted Label: A, True Label: B
Evaluating MNLI: 100% | 2993/3000 [33:15<00:04, 1.63it/s]
Probabilities for choices: {'A': 0.47314453125, 'B': 0.26123046875, 'C': 0.265380859375}
Predicted Label: A, True Label: A
Evaluating MNLI: 100% | 2994/3000 [33:15<00:03, 1.60it/s]
Probabilities for choices: {'A': 0.38134765625, 'B': 0.2156982421875, 'C': 0.40283203125}
Predicted Label: C, True Label: C
Evaluating MNLI: 100% | 2995/3000 [33:16<00:03, 1.55it/s]
Probabilities for choices: {'A': 0.36328125, 'B': 0.2763671875, 'C': 0.3603515625}
Predicted Label: A, True Label: A
Evaluating MNLI: 100% | 2996/3000 [33:17<00:02, 1.52it/s]
Probabilities for choices: {'A': 0.4228515625, 'B': 0.2371826171875, 'C': 0.33984375}
Predicted Label: A, True Label: B
Evaluating MNLI: 100% | 2997/3000 [33:17<00:01, 1.50it/s]
Probabilities for choices: {'A': 0.365234375, 'B': 0.27783203125, 'C': 0.35693359375}
Predicted Label: A, True Label: A
Evaluating MNLI: 100% | 2998/3000 [33:18<00:01, 1.49it/s]
Probabilities for choices: {'A': 0.412841796875, 'B': 0.260498046875, 'C': 0.32666015625}
Predicted Label: A, True Label: A
Evaluating MNLI: 100% | 2999/3000 [33:19<00:00, 1.49it/s]
Probabilities for choices: {'A': 0.39892578125, 'B': 0.251708984375, 'C': 0.349365234375}
Predicted Label: A, True Label: A
Evaluating MNLI: 100% | 3000/3000 [33:19<00:00, 1.50it/s]
Evaluation completed. Accuracy: 0.4067 (1220/3000)
Logits saved!
(base) root@e8e99ab71e21:~/Workspace/SF_CPT/MNLI#
```

7b loratune acc: **0.4690**

```
root@e8e99ab71e21: ~  
Predicted Answer: B, True Answer: B  
Probabilities for choices: {'A': 7.889262633398175e-06, 'B': 9.736124129133827e-10, 'C': 0.9999921321868896}  
Predicted Answer: C, True Answer: C  
Probabilities for choices: {'A': 0.2018132209777832, 'B': 1.6338658071093595e-16, 'C': 0.7981867790222168}  
Predicted Answer: C, True Answer: B  
Probabilities for choices: {'A': 1.0, 'B': 1.1132654117220728e-27, 'C': 9.82453264707878e-28}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.4687906503677368, 'B': 2.2277836585031519e-13, 'C': 0.531209409236908}  
Predicted Answer: C, True Answer: A  
Probabilities for choices: {'A': 1.0, 'B': 2.396757375836046e-19, 'C': 9.056076721858375e-11}  
Predicted Answer: A, True Answer: C  
Probabilities for choices: {'A': 1.0, 'B': 3.3315444153414475e-11, 'C': 5.4927885156930145e-11}  
Predicted Answer: A, True Answer: B  
Probabilities for choices: {'A': 0.22270014882087708, 'B': 0.7772998809814453, 'C': 3.0928471589364293e-12}  
Predicted Answer: B, True Answer: A  
Probabilities for choices: {'A': 0.9996646642684937, 'B': 1.1396095655688554e-12, 'C': 0.00033535013790242374}  
Predicted Answer: A, True Answer: C  
Probabilities for choices: {'A': 0.994239330291748, 'B': 0.0021748896688222885, 'C': 0.0035857870243489742}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.999998807907104, 'B': 1.125351613378663e-07, 'C': 1.818961425925636e-09}  
Predicted Answer: A, True Answer: B  
Probabilities for choices: {'A': 0.14730098843574524, 'B': 0.847658634185791, 'C': 0.005040362477302551}  
Predicted Answer: B, True Answer: A  
Probabilities for choices: {'A': 0.002773809712380171, 'B': 0.9875446557998657, 'C': 0.00968154706608864}  
Predicted Answer: B, True Answer: A  
Probabilities for choices: {'A': 3.202002016330463e-15, 'B': 6.825602838489431e-08, 'C': 0.999998807907104}  
Predicted Answer: C, True Answer: A  
Evaluation: 100%|#####| 3000/3000 [00:01<00:00, 1869.08it/s]  
Evaluation completed. Accuracy: 0.4690 (1407/3000)  
(base) root@e8e99ab71e21:~/Workspace/SF_CPT/MNLI#
```

13b loratune acc: **0.8753**

```
Evaluating MNLI: 100%|#####| 2992/3000 [43:25<00:06, 1.22it/s]  
Probabilities for choices: {'A': 0.0694580078125, 'B': 0.0775146484375, 'C': 0.85302734375}  
Predicted Label: C, True Label: C  
Evaluating MNLI: 100%|#####| 2993/3000 [43:26<00:05, 1.20it/s]  
Probabilities for choices: {'A': 0.276611328125, 'B': 0.599609375, 'C': 0.12371826171875}  
Predicted Label: B, True Label: B  
Evaluating MNLI: 100%|#####| 2994/3000 [43:27<00:05, 1.18it/s]  
Probabilities for choices: {'A': 0.62548828125, 'B': 0.2978515625, 'C': 0.07647705078125}  
Predicted Label: A, True Label: A  
Evaluating MNLI: 100%|#####| 2995/3000 [43:28<00:04, 1.17it/s]  
Probabilities for choices: {'A': 0.1497802734375, 'B': 0.42333984375, 'C': 0.4267578125}  
Predicted Label: C, True Label: C  
Evaluating MNLI: 100%|#####| 2996/3000 [43:29<00:03, 1.16it/s]  
Probabilities for choices: {'A': 0.732421875, 'B': 0.23046875, 'C': 0.03704833984375}  
Predicted Label: A, True Label: A  
Evaluating MNLI: 100%|#####| 2997/3000 [43:29<00:02, 1.16it/s]  
Probabilities for choices: {'A': 0.156494140625, 'B': 0.5771484375, 'C': 0.266357421875}  
Predicted Label: B, True Label: B  
Evaluating MNLI: 100%|#####| 2998/3000 [43:30<00:01, 1.16it/s]  
Probabilities for choices: {'A': 0.5458984375, 'B': 0.375, 'C': 0.0792236328125}  
Predicted Label: A, True Label: A  
Evaluating MNLI: 100%|#####| 2999/3000 [43:31<00:00, 1.15it/s]  
Probabilities for choices: {'A': 0.8935546875, 'B': 0.097900390625, 'C': 0.00868988037109375}  
Predicted Label: A, True Label: A  
Evaluating MNLI: 100%|#####| 3000/3000 [43:32<00:00, 1.15it/s]  
Probabilities for choices: {'A': 0.367431640625, 'B': 0.337158203125, 'C': 0.295166015625}  
Predicted Label: A, True Label: A  
Evaluation completed. Accuracy: 0.8753 (2626/3000)  
Logits saved!
```

Proxy tuning acc: **0.4940**

```
root@e8e99ab71e21: ~  
Predicted Answer: B, True Answer: B  
Probabilities for choices: {'A': 3.1201903766486794e-05, 'B': 2.699493393265584e-07, 'C': 0.9999685287475586}  
Predicted Answer: C, True Answer: C  
Probabilities for choices: {'A': 0.03514484688639641, 'B': 4.630865569482667e-12, 'C': 0.9648551344871521}  
Predicted Answer: C, True Answer: B  
Probabilities for choices: {'A': 1.0, 'B': 8.282971771330036e-20, 'C': 4.1649400103225907e-20}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.665410578250885, 'B': 1.6543609815400373e-09, 'C': 0.3345894515514374}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.9999992847442627, 'B': 3.9397036522871576e-13, 'C': 6.893610020597407e-07}  
Predicted Answer: A, True Answer: C  
Probabilities for choices: {'A': 0.999998807907104, 'B': 1.1253516163378663e-07, 'C': 5.315784434856141e-08}  
Predicted Answer: A, True Answer: B  
Probabilities for choices: {'A': 0.3486451804637909, 'B': 0.6513549089431763, 'C': 1.9533878958810647e-09}  
Predicted Answer: B, True Answer: A  
Probabilities for choices: {'A': 0.9959298968315125, 'B': 1.0424797913799466e-08, 'C': 0.004070138093084097}  
Predicted Answer: A, True Answer: C  
Probabilities for choices: {'A': 0.9867672324180603, 'B': 0.00967392511665821, 'C': 0.0035588382743299007}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.9999884366989136, 'B': 1.1478767191874795e-05, 'C': 1.6373583378026524e-07}  
Predicted Answer: A, True Answer: B  
Probabilities for choices: {'A': 0.1183014065027237, 'B': 0.8741357326507568, 'C': 0.007562756072729826}  
Predicted Answer: B, True Answer: A  
Probabilities for choices: {'A': 0.022661548107862473, 'B': 0.9635935425758362, 'C': 0.013744923286139965}  
Predicted Answer: B, True Answer: A  
Probabilities for choices: {'A': 1.675200828179625e-11, 'B': 3.500854518279084e-06, 'C': 0.99996542930603}  
Predicted Answer: C, True Answer: A  
Evaluating: 100%|*****| 3000/3000 [00:01<00:00, 1893.84it/s]  
Evaluation completed. Accuracy: 0.4940 (1482/3000)  
(base) root@e8e99ab71e21:~/Workspace/SF_CPT/MNLI#
```

Consistent proxy tuning acc: **0.7470**

```
root@e8e99ab71e21: ~  
Predicted Answer: B, True Answer: B  
Probabilities for choices: {'A': 0.00019090660498477519, 'B': 0.054188381880521774, 'C': 0.9456207156181335}  
Predicted Answer: C, True Answer: C  
Probabilities for choices: {'A': 0.00044445483945310116, 'B': 0.06005994230508804, 'C': 0.9394956231117249}  
Predicted Answer: C, True Answer: B  
Probabilities for choices: {'A': 0.8377199172973633, 'B': 0.147866353392601, 'C': 0.01441376656293869}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.5773087739944458, 'B': 0.3906266391277313, 'C': 0.032064590603113174}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.0015102607430890203, 'B': 0.12573258578777313, 'C': 0.8727571368217468}  
Predicted Answer: C, True Answer: C  
Probabilities for choices: {'A': 0.0898967981338501, 'B': 0.8799915909767151, 'C': 0.030111655592918396}  
Predicted Answer: B, True Answer: B  
Probabilities for choices: {'A': 0.7243098616600037, 'B': 0.2706548273563385, 'C': 0.005035280715674162}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.09026923030614853, 'B': 0.7677173614501953, 'C': 0.1420134305939795}  
Predicted Answer: B, True Answer: C  
Probabilities for choices: {'A': 0.8058262467384338, 'B': 0.19140051305294037, 'C': 0.0027731757145375013}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.6151634454727173, 'B': 0.3789912164211273, 'C': 0.005845300387591124}  
Predicted Answer: A, True Answer: B  
Probabilities for choices: {'A': 0.0751131922006607, 'B': 0.9008792042732239, 'C': 0.024007616564631462}  
Predicted Answer: B, True Answer: A  
Probabilities for choices: {'A': 0.7287423014640808, 'B': 0.25984105467796326, 'C': 0.011416619643568993}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.007801302708685398, 'B': 0.03233550116419792, 'C': 0.9598631858825684}  
Predicted Answer: C, True Answer: A  
Evaluating: 100%|*****| 3000/3000 [00:01<00:00, 1683.10it/s]  
Evaluation completed. Accuracy: 0.7470 (2241/3000)  
(base) root@e8e99ab71e21:~/Workspace/SF_CPT/MNLI#
```

Gaussian Process tuning acc: **0.7467**

800/12000 (6.67%)

```
root@e8e99ab71e21: ~  
Probabilities for choices: {'A': 0.0005098295514471829, 'B': 0.173199862241745, 'C': 0.8262903094291687}  
Predicted Answer: C, True Answer: C  
Probabilities for choices: {'A': 0.010901786386966705, 'B': 0.30400726199150085, 'C': 0.685090959072113}  
Predicted Answer: C, True Answer: B  
Probabilities for choices: {'A': 0.834751546382904, 'B': 0.1384153664112091, 'C': 0.026833046227693558}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.5834227204322815, 'B': 0.3826179802417755, 'C': 0.033959273248910904}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.0019437253940850496, 'B': 0.10949253290891647, 'C': 0.8885637521743774}  
Predicted Answer: C, True Answer: C  
Evaluating: 100%|#####| 2992/3000 [00:01<00:00, 1675.87it/s]  
Probabilities for choices: {'A': 0.11954743415117264, 'B': 0.8561651110649109, 'C': 0.02428753487765789}  
Predicted Answer: B, True Answer: B  
Probabilities for choices: {'A': 0.6568332314491272, 'B': 0.34076058864593506, 'C': 0.002406215528026223}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.10712703317403793, 'B': 0.7553191184997559, 'C': 0.13755382597446442}  
Predicted Answer: B, True Answer: C  
Probabilities for choices: {'A': 0.8167802095413208, 'B': 0.1822483092546463, 'C': 0.0009714115876704454}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.7293615341186523, 'B': 0.2683171331882477, 'C': 0.0023213978856801987}  
Predicted Answer: A, True Answer: B  
Probabilities for choices: {'A': 0.19258947670459747, 'B': 0.7982611656188965, 'C': 0.00914937723428011}  
Predicted Answer: B, True Answer: A  
Probabilities for choices: {'A': 0.7796697020530701, 'B': 0.21314983069896698, 'C': 0.007180509623140097}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.007431212812662125, 'B': 0.034361582249403, 'C': 0.9582072496414185}  
Predicted Answer: C, True Answer: A  
Evaluating: 100%|#####| 3000/3000 [00:01<00:00, 1729.11it/s]  
Evaluation completed. Accuracy: 0.7467 (2240/3000)  
(base) root@e8e99ab71e21:~/Workspace/SF_CPT/MNLI#
```

Gaussian Process with filter acc: **0.8610**

Config: input_threshold=0.08, output_threshold=0.9

230/12000 (2.12%)

```
root@e8e99ab71e21: ~  
Predicted Answer: B, True Answer: B  
Probabilities for choices: {'A': 0.003258302342146635, 'B': 0.027495402842760086, 'C': 0.9692463278770447}  
Predicted Answer: C, True Answer: C  
Probabilities for choices: {'A': 0.004205823410302401, 'B': 0.013790364377200603, 'C': 0.9820037484169006}  
Predicted Answer: C, True Answer: B  
Probabilities for choices: {'A': 0.9813623428344727, 'B': 0.013567697256803513, 'C': 0.005069877952337265}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.8807855844497681, 'B': 0.09882140904664993, 'C': 0.020392948761582375}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.0014275535941123962, 'B': 0.003478451631963253, 'C': 0.9950940608978271}  
Predicted Answer: C, True Answer: C  
Probabilities for choices: {'A': 0.036738328635692596, 'B': 0.9328044652938843, 'C': 0.0304571446031332}  
Predicted Answer: B, True Answer: B  
Probabilities for choices: {'A': 0.8708838820457458, 'B': 0.10731394588947296, 'C': 0.021802151575684547}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.028437186032533646, 'B': 0.7220343351364136, 'C': 0.2495284080505371}  
Predicted Answer: B, True Answer: C  
Probabilities for choices: {'A': 0.9663342237472534, 'B': 0.03155193105340004, 'C': 0.002113847527652979}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.013727769255638123, 'B': 0.9775463938713074, 'C': 0.008725901134312153}  
Predicted Answer: B, True Answer: B  
Probabilities for choices: {'A': 0.24724550545215607, 'B': 0.7266950011253357, 'C': 0.026059487834572792}  
Predicted Answer: B, True Answer: A  
Probabilities for choices: {'A': 0.977471649646759, 'B': 0.019057663157582283, 'C': 0.003470658091828227}  
Predicted Answer: A, True Answer: A  
Probabilities for choices: {'A': 0.0837399885058403, 'B': 0.07051613926887512, 'C': 0.8457438945770264}  
Predicted Answer: C, True Answer: A  
Evaluating: 100%|#####| 3000/3000 [00:01<00:00, 1693.03it/s]  
Evaluation completed. Accuracy: 0.8610 (2583/3000)  
(base) root@e8e99ab71e21:~/Workspace/SF_CPT/MNLI#
```