```
In [1]: from transformers import AutoModelForCausalLM, AutoTokenizer
        import torch
        from torch.amp import autocast, GradScaler
        from pytorch_memlab import MemReporter
        import qc
In [2]: model directory = r"Z:/llmfile/Llama-2-7B-hf/models--meta-llama-2-7b-hf/snapshots/01c7f73d771dfac7d29232
        model = AutoModelForCausalLM.from pretrained(model directory)
        tokenizer = AutoTokenizer.from_pretrained(model_directory)
        # 设置优化器(Adam)和 GradScaler 用于混合精度
        optimizer = torch.optim.AdamW(model.parameters(), lr=1e-5)
        scaler = GradScaler()
        # 初始输入和标签
        input_text = "Hello"
        input_ids = tokenizer(input_text, return_tensors="pt").input_ids
        labels = input_ids.clone() # 使用输入作为标签
        reporter = MemReporter(model)
        # 先执行一次前向和反向传播, 确保 scaler 正常初始化
        print("==初始化一下==")
        model.train()
        optimizer.zero_grad()
        with autocast("cuda"):
           outputs = model(input_ids, labels=labels)
           loss = outputs.loss
        scaler.scale(loss).backward() # 反向传播以初始化 GradScaler
        # 执行优化器更新并监控内存
        print("==OptimizerMemoryUsage==")
        scaler.step(optimizer) # 执行优化器更新
        scaler.update() # 更新 scaler 状态
        reporter.report() # 记录优化器更新后的内存使用情况
      Loading checkpoint shards: 0%|
                                         | 0/2 [00:00<?, ?it/s]
      ==初始化一下==
      ==OptimizerMemoryUsage==
      Element type
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                        Storage on cpu
      Tensor0
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      Tensor3
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(11008, 4096)

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model.embed tokens.weight
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model.embed_tokens.weight.grad
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model.norm.weight
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model.norm.weight.grad
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model.layers.0.input_layernorm.weight
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model.layers.0.input_layernorm.weight.grad
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model.layers.0.post attention layernorm.weight
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model.layers.0.post_attention_layernorm.weight.grad
model.layers.1.input layernorm.weight
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model.layers.1.input_layernorm.weight.grad
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model.layers.2.input_layernorm.weight
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model.layers.2.post_attention_layernorm.weight
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model.layers.10.post attention layernorm.weight
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model.layers.11.input_layernorm.weight
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model.layers.11.post_attention_layernorm.weight
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{\tt model.layers.14.input\_layernorm.weight}
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model.layers.14.input_layernorm.weight.grad
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model.layers.15.input_layernorm.weight
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model.layers.15.input_layernorm.weight.grad
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model.layers.15.post attention layernorm.weight
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model.layers.16.input_layernorm.weight
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model.layers.16.post_attention_layernorm.weight.grad
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{\tt model.layers.17.post\_attention\_layernorm.weight}
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model.layers.18.input_layernorm.weight
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model.layers.18.post attention layernorm.weight
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model.layers.19.input_layernorm.weight
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model.layers.20.input_layernorm.weight
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model.layers.22.input_layernorm.weight
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{\tt model.layers.24.post\_attention\_layernorm.weight}
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model.layers.24.post_attention_layernorm.weight.grad
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model.layers.25.post_attention_layernorm.weight
model.layers.25.post attention layernorm.weight.grad
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model.layers.26.input_layernorm.weight
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{\tt model.layers.26.post\_attention\_layernorm.weight}
{\tt model.layers.26.post\_attention\_layernorm.weight.grad}
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model.layers.27.input layernorm.weight
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model.layers.28.input layernorm.weight
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{\tt model.layers.29.post\_attention\_layernorm.weight}
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model.layers.30.input layernorm.weight
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model.layers.30.input_layernorm.weight.grad
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model.layers.31.input layernorm.weight
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model.layers.31.input_layernorm.weight.grad
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Tensor84
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                                                    (4096, 4096)
model.layers.0.self attn.q proj.weight
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model.layers.0.self_attn.q_proj.weight.grad
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model.layers.0.self_attn.k_proj.weight
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model.layers.0.self_attn.k_proj.weight.grad
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model.layers.0.self attn.v proj.weight
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model.layers.0.self_attn.v_proj.weight.grad
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model.layers.0.self_attn.o_proj.weight
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model.layers.0.self_attn.o_proj.weight.grad
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                                                       (4096, 4096)
                                                   (11008, 4096)
                                                                    172.00M
model.layers.0.mlp.gate proj.weight
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model.layers.0.mlp.gate_proj.weight.grad
model.layers.0.mlp.up proj.weight
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model.layers.0.mlp.up_proj.weight.grad
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model.layers.0.mlp.down_proj.weight
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{\tt model.layers.0.mlp.down\_proj.weight.grad}
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model.layers.1.self_attn.q_proj.weight
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model.layers.1.self_attn.q_proj.weight.grad
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model.layers.1.self_attn.k_proj.weight
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model.layers.1.self\_attn.k\_proj.weight.grad
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model.layers.1.self attn.v proj.weight
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\verb|model.layers.1.self_attn.v_proj.weight.grad|\\
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model.layers.1.self attn.o proj.weight
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{\tt model.layers.1.self\_attn.o\_proj.weight.grad}
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model.layers.1.mlp.gate_proj.weight
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{\tt model.layers.1.mlp.gate\_proj.weight.grad}
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model.layers.1.mlp.up_proj.weight
                                                   (11008, 4096)
                                                                    172.00M
{\tt model.layers.1.mlp.up\_proj.weight.grad}
                                                   (11008, 4096)
                                                                    172.00M
model.layers.1.mlp.down_proj.weight
                                                   (4096, 11008)
                                                                    172.00M
                                                   (4096, 11008)
                                                                    172.00M
model.layers.1.mlp.down_proj.weight.grad
model.layers.2.self_attn.q_proj.weight
                                                    (4096, 4096)
                                                                     64.00M
                                                       (4096.4096)
                                                                        64.00M
model. layers. 2. self\_attn. q\_proj. weight. grad
model.layers.2.self_attn.k_proj.weight
                                                    (4096, 4096)
                                                                     64.00M
\verb|model.layers.2.self_attn.k_proj.weight.grad|\\
                                                       (4096, 4096)
                                                                        64.00M
model.layers.2.self_attn.v_proj.weight
                                                    (4096, 4096)
                                                                     64.00M
                                                       (4096.4096)
                                                                        64.00M
model.layers.2.self_attn.v_proj.weight.grad
model.layers.2.self_attn.o_proj.weight
                                                    (4096, 4096)
                                                                     64.00M
model.layers.2.self attn.o proj.weight.grad
                                                       (4096, 4096)
                                                                        64.00M
model.layers.2.mlp.gate_proj.weight
                                                   (11008, 4096)
                                                                    172.00M
                                                   (11008, 4096)
model.layers.2.mlp.gate proj.weight.grad
                                                                    172.00M
model.layers.2.mlp.up proj.weight
                                                   (11008, 4096)
                                                                    172.00M
model.layers.2.mlp.up proj.weight.grad
                                                   (11008, 4096)
                                                                    172.00M
model.layers.2.mlp.down_proj.weight
                                                   (4096, 11008)
                                                                    172.00M
model.layers.2.mlp.down_proj.weight.grad
                                                   (4096, 11008)
                                                                    172.00M
model.layers.3.self_attn.q_proj.weight
                                                    (4096, 4096)
                                                                     64.00M
{\tt model.layers.3.self\_attn.q\_proj.weight.grad}
                                                       (4096, 4096)
                                                                        64.00M
model.layers.3.self_attn.k_proj.weight
                                                    (4096, 4096)
                                                                     64.00M
model.layers.3.self_attn.k_proj.weight.grad
model.layers.3.self_attn.v_proj.weight
                                                       (4096, 4096)
                                                                        64.00M
                                                    (4096.4096)
                                                                     64.00M
model.layers.3.self attn.v proj.weight.grad
                                                       (4096, 4096)
                                                                        64.00M
                                                                     64.00M
model.layers.3.self_attn.o_proj.weight
                                                    (4096, 4096)
model.layers.3.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
                                                                        64.00M
model.layers.3.mlp.gate_proj.weight
                                                   (11008, 4096)
                                                                    172.00M
model.layers.3.mlp.gate proj.weight.grad
                                                   (11008, 4096)
                                                                    172.00M
model.layers.3.mlp.up_proj.weight
                                                   (11008, 4096)
                                                                    172.00M
model.layers.3.mlp.up proj.weight.grad
                                                   (11008, 4096)
                                                                    172.00M
model.layers.3.mlp.down_proj.weight
                                                   (4096, 11008)
                                                                    172.00M
model.layers.3.mlp.down proj.weight.grad
                                                   (4096, 11008)
                                                                    172.00M
model.layers.4.self_attn.q_proj.weight
                                                    (4096, 4096)
                                                                     64.00M
\label{layers.4.self_attn.qproj.weight.grad} $$\operatorname{model.layers.4.self_attn.k_proj.weight}$$
                                                       (4096, 4096)
                                                                        64.00M
                                                    (4096.4096)
                                                                     64.00M
model.layers.4.self attn.k proj.weight.grad
                                                       (4096, 4096)
                                                                        64.00M
                                                    (4096, 4096)
                                                                     64.00M
model.layers.4.self_attn.v_proj.weight
model.layers.4.self_attn.v_proj.weight.grad
                                                       (4096.4096)
                                                                        64.00M
model.layers.4.self_attn.o_proj.weight
                                                    (4096, 4096)
                                                                     64.00M
                                                       (4096, 4096)
model.layers.4.self_attn.o_proj.weight.grad
                                                                        64.00M
                                                                    172.00M
                                                   (11008, 4096)
model.layers.4.mlp.gate_proj.weight
model.layers.4.mlp.gate proj.weight.grad
                                                   (11008, 4096)
                                                                    172.00M
                                                   (11008, 4096)
                                                                    172.00M
model.layers.4.mlp.up_proj.weight
```

```
model.layers.4.mlp.up_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.4.mlp.down_proj.weight
                                                  (4096, 11008)
                                                                  172.00M
model.layers.4.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
model.layers.5.self_attn.q_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.5.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.5.self_attn.k_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
\verb|model.layers.5.self_attn.k_proj.weight.grad|\\
                                                      (4096, 4096)
                                                                      64.00M
model.layers.5.self attn.v proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.5.self attn.v proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.5.self_attn.o_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.5.self_attn.o_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.5.mlp.gate_proj.weight
                                                  (11008, 4096)
                                                                  172.00M
model.layers.5.mlp.gate proj.weight.grad
                                                 (11008, 4096)
                                                                  172.00M
model.layers.5.mlp.up_proj.weight
                                                  (11008, 4096)
                                                                  172.00M
model.layers.5.mlp.up proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.5.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                  172.00M
model.layers.5.mlp.down proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
model.layers.6.self_attn.q_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.6.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.6.self_attn.k_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.6.self attn.k proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.6.self_attn.v_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.6.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.6.self_attn.o_proj.weight
                                                   (4096.4096)
                                                                   64.00M
                                                      (4096, 4096)
model.layers.6.self attn.o proj.weight.grad
                                                                      64.00M
                                                  (11008, 4096)
                                                                  172.00M
model.layers.6.mlp.gate_proj.weight
model.layers.6.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
                                                  (11008, 4096)
model.layers.6.mlp.up_proj.weight
                                                                  172.00M
model.layers.6.mlp.up_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.6.mlp.down_proj.weight
                                                  (4096, 11008)
                                                                  172.00M
model.layers.6.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
{\tt model.layers.7.self\_attn.q\_proj.weight}
                                                   (4096.4096)
                                                                   64.00M
model.layers.7.self attn.q proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
                                                                   64.00M
model.layers.7.self\_attn.k\_proj.weight
                                                   (4096, 4096)
model.layers.7.self attn.k proj.weight.grad
                                                      (4096.4096)
                                                                      64.00M
model.layers.7.self_attn.v_proj.weight
                                                   (4096.4096)
                                                                   64.00M
model.layers.7.self attn.v proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
{\tt model.layers.7.self\_attn.o\_proj.weight}
                                                   (4096, 4096)
                                                                   64.00M
                                                      (4096, 4096)
                                                                      64.00M
model.layers.7.self_attn.o_proj.weight.grad
model.layers.7.mlp.gate_proj.weight
                                                  (11008, 4096)
                                                                  172.00M
{\tt model.layers.7.mlp.gate\_proj.weight.grad}
                                                  (11008, 4096)
                                                                  172.00M
                                                  (11008, 4096)
                                                                  172.00M
model.layers.7.mlp.up_proj.weight
model.layers.7.mlp.up_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.7.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                  172.00M
model.layers.7.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
model.layers.8.self attn.q proj.weight
                                                   (4096.4096)
                                                                   64.00M
model.layers.8.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.8.self_attn.k_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.8.self_attn.k_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
                                                                   64.00M
                                                   (4096.4096)
model.layers.8.self_attn.v_proj.weight
model.layers.8.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.8.self_attn.o_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.8.self attn.o proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
                                                  (11008, 4096)
                                                                  172.00M
model.layers.8.mlp.gate proj.weight
model.layers.8.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
                                                 (11008, 4096)
                                                                  172.00M
model.layers.8.mlp.up proj.weight
model.layers.8.mlp.up_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.8.mlp.down_proj.weight
                                                  (4096, 11008)
                                                                  172.00M
model.layers.8.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
model.layers.9.self attn.q proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.9.self_attn.q_proj.weight.grad
                                                      (4096.4096)
                                                                      64.00M
model.layers.9.self_attn.k_proj.weight
model.layers.9.self_attn.k_proj.weight.grad
                                                   (4096, 4096)
                                                                   64.00M
                                                      (4096.4096)
                                                                      64.00M
model.layers.9.self attn.v proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.9.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.9.self_attn.o_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.9.self_attn.o_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.9.mlp.gate proj.weight
                                                  (11008, 4096)
                                                                  172.00M
model.layers.9.mlp.gate_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.9.mlp.up proj.weight
                                                  (11008, 4096)
                                                                  172.00M
                                                  (11008, 4096)
model.layers.9.mlp.up_proj.weight.grad
                                                                  172.00M
model.layers.9.mlp.down proj.weight
                                                  (4096, 11008)
                                                                  172.00M
model.layers.9.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
model.layers.10.self attn.q proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.10.self attn.q proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
model.layers.10.self attn.k proj.weight
                                                   (4096, 4096)
                                                                   64.00M
                                                       (4096.4096)
                                                                       64.00M
model.layers.10.self_attn.k_proj.weight.grad
model.layers.10.self attn.v proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.10.self_attn.v_proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
                                                   (4096, 4096)
                                                                   64.00M
model.layers.10.self attn.o proj.weight
                                                                       64.00M
model.layers.10.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
model.layers.10.mlp.gate proj.weight
                                                  (11008, 4096)
                                                                  172.00M
                                                  (11008.4096)
model.layers.10.mlp.gate_proj.weight.grad
                                                                   172.00M
```

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model.layers.10.mlp.up_proj.weight
                                                 (11008, 4096)
                                                                  172.00M
model.layers.10.mlp.up proj.weight.grad
                                                 (11008, 4096)
                                                                  172.00M
model.layers.10.mlp.down proj.weight
                                                 (4096, 11008)
                                                                  172.00M
model.layers.10.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                   172.00M
model.layers.11.self_attn.q_proj.weight
                                                  (4096, 4096)
                                                                   64.00M
model.layers.11.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
{\tt model.layers.11.self\_attn.k\_proj.weight}
                                                  (4096, 4096)
                                                                   64.00M
model.layers.11.self attn.k proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.11.self_attn.v_proj.weight
                                                  (4096, 4096)
                                                                   64.00M
model.layers.11.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.11.self_attn.o_proj.weight
                                                  (4096, 4096)
                                                                   64.00M
model.layers.11.self_attn.o_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.11.mlp.gate proj.weight
                                                 (11008, 4096)
                                                                  172.00M
model.layers.11.mlp.gate_proj.weight.grad
                                                  (11008, 4096)
                                                                   172.00M
model.layers.11.mlp.up proj.weight
                                                 (11008, 4096)
                                                                  172.00M
                                                 (11008, 4096)
model.layers.11.mlp.up proj.weight.grad
                                                                  172.00M
model.layers.11.mlp.down proj.weight
                                                 (4096, 11008)
                                                                  172.00M
model.layers.11.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                   172.00M
model.layers.12.self attn.q proj.weight
                                                  (4096, 4096)
                                                                   64.00M
model.layers.12.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.12.self attn.k proj.weight
                                                  (4096, 4096)
                                                                   64.00M
                                                                       64.00M
model.layers.12.self_attn.k_proj.weight.grad
                                                      (4096, 4096)
model.layers.12.self_attn.v_proj.weight
                                                  (4096, 4096)
                                                                   64.00M
model.layers.12.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
                                                                   64.00M
model.layers.12.self attn.o proj.weight
                                                  (4096.4096)
                                                      (4096, 4096)
                                                                       64.00M
model.layers.12.self_attn.o_proj.weight.grad
model.layers.12.mlp.gate proj.weight
                                                 (11008, 4096)
                                                                  172.00M
                                                  (11008, 4096)
                                                                   172.00M
model.layers.12.mlp.gate_proj.weight.grad
model.layers.12.mlp.up_proj.weight
                                                 (11008, 4096)
                                                                  172.00M
model.layers.12.mlp.up_proj.weight.grad
                                                 (11008, 4096)
                                                                  172.00M
model.layers.12.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                  172.00M
model.layers.12.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                   172.00M
model.layers.13.self attn.q proj.weight
                                                  (4096, 4096)
                                                                   64.00M
                                                      (4096, 4096)
                                                                       64.00M
model.layers.13.self_attn.q_proj.weight.grad
model.layers.13.self attn.k proj.weight
                                                  (4096.4096)
                                                                   64.00M
model.layers.13.self_attn.k_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.13.self attn.v proj.weight
                                                                   64.00M
                                                  (4096, 4096)
                                                      (4096, 4096)
                                                                       64.00M
model.layers.13.self_attn.v_proj.weight.grad
                                                  (4096, 4096)
                                                                   64.00M
model.layers.13.self_attn.o_proj.weight
model.layers.13.self_attn.o_proj.weight.grad
                                                      (4096.4096)
                                                                       64.00M
model.layers.13.mlp.gate_proj.weight
                                                 (11008, 4096)
                                                                  172.00M
                                                  (11008, 4096)
                                                                   172.00M
model.layers.13.mlp.gate_proj.weight.grad
model.layers.13.mlp.up_proj.weight
                                                 (11008, 4096)
                                                                  172.00M
                                                 (11008, 4096)
                                                                  172.00M
model.layers.13.mlp.up_proj.weight.grad
model.layers.13.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                  172.00M
model.layers.13.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                   172.00M
model.layers.14.self_attn.q_proj.weight
                                                  (4096, 4096)
                                                                   64.00M
model.layers.14.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.14.self_attn.k_proj.weight
                                                  (4096, 4096)
                                                                   64.00M
                                                      (4096.4096)
                                                                       64.00M
model.layers.14.self_attn.k_proj.weight.grad
model.layers.14.self attn.v proj.weight
                                                  (4096, 4096)
                                                                   64.00M
model.layers.14.self_attn.v_proj.weight.grad
                                                      (4096.4096)
                                                                       64.00M
model.layers.14.self_attn.o_proj.weight
                                                  (4096, 4096)
                                                                   64.00M
model.layers.14.self_attn.o_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.14.mlp.gate proj.weight
                                                 (11008, 4096)
                                                                  172.00M
                                                  (11008, 4096)
model.layers.14.mlp.gate proj.weight.grad
                                                                   172.00M
model.layers.14.mlp.up_proj.weight
                                                 (11008, 4096)
                                                                  172.00M
model.layers.14.mlp.up_proj.weight.grad
                                                 (11008, 4096)
                                                                  172.00M
model.layers.14.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                  172.00M
model.layers.14.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                   172.00M
model.layers.15.self_attn.q_proj.weight
                                                  (4096, 4096)
                                                                   64.00M
model.layers.15.self_attn.q_proj.weight.grad
model.layers.15.self_attn.k_proj.weight
                                                      (4096, 4096)
                                                                       64.00M
                                                  (4096.4096)
                                                                   64.00M
model.layers.15.self attn.k proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
                                                  (4096, 4096)
                                                                   64.00M
model.layers.15.self attn.v proj.weight
model.layers.15.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.15.self_attn.o_proj.weight
                                                  (4096, 4096)
                                                                   64.00M
model.layers.15.self attn.o proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.15.mlp.gate_proj.weight
                                                 (11008, 4096)
                                                                  172.00M
model.layers.15.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                   172.00M
                                                 (11008, 4096)
model.layers.15.mlp.up_proj.weight
                                                                  172.00M
model.layers.15.mlp.up proj.weight.grad
                                                 (11008, 4096)
                                                                  172.00M
model.layers.15.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                  172.00M
model.layers.15.mlp.down proj.weight.grad
                                                  (4096, 11008)
                                                                   172.00M
model.layers.16.self attn.q proj.weight
                                                  (4096, 4096)
                                                                   64.00M
model.layers.16.self attn.q proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
                                                  (4096, 4096)
                                                                   64.00M
model.layers.16.self_attn.k_proj.weight
model.layers.16.self attn.k proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.16.self_attn.v_proj.weight
                                                  (4096, 4096)
                                                                   64.00M
model.layers.16.self attn.v proj.weight.grad
                                                      (4096.4096)
                                                                       64.00M
                                                                   64.00M
                                                  (4096, 4096)
model.layers.16.self_attn.o_proj.weight
model.layers.16.self attn.o proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
                                                 (11008, 4096)
model.layers.16.mlp.gate_proj.weight
                                                                 172.00M
```

```
model.layers.16.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.16.mlp.up_proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.16.mlp.up_proj.weight.grad
                                                 (11008, 4096)
                                                                 172.00M
model.layers.16.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                 172.00M
                                                  (4096, 11008)
                                                                  172.00M
model.layers.16.mlp.down proj.weight.grad
model.layers.17.self_attn.q_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.17.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.17.self attn.k proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.17.self_attn.k_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
                                                  (4096, 4096)
                                                                  64.00M
model.layers.17.self_attn.v_proj.weight
model.layers.17.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.17.self_attn.o_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.17.self attn.o proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.17.mlp.gate_proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.17.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
                                                 (11008, 4096)
model.layers.17.mlp.up_proj.weight
                                                                 172.00M
model.layers.17.mlp.up proj.weight.grad
                                                 (11008, 4096)
                                                                 172.00M
model.layers.17.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                 172.00M
model.layers.17.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
model.layers.18.self_attn.q_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.18.self attn.q proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
                                                  (4096, 4096)
model.layers.18.self_attn.k_proj.weight
                                                                  64.00M
model.layers.18.self_attn.k_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.18.self_attn.v_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.18.self attn.v proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
                                                                  64.00M
                                                  (4096, 4096)
model.layers.18.self_attn.o_proj.weight
model.layers.18.self attn.o proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
                                                 (11008.4096)
model.layers.18.mlp.gate_proj.weight
                                                                 172.00M
model.layers.18.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.18.mlp.up_proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.18.mlp.up proj.weight.grad
                                                 (11008, 4096)
                                                                 172.00M
model.layers.18.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                 172.00M
model.layers.18.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
{\tt model.layers.19.self\_attn.q\_proj.weight}
                                                  (4096, 4096)
                                                                  64.00M
model.layers.19.self attn.q proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.19.self_attn.k_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.19.self attn.k proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.19.self_attn.v_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.19.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.19.self_attn.o_proj.weight
                                                  (4096.4096)
                                                                  64.00M
model.layers.19.self_attn.o_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.19.mlp.gate_proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.19.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
                                                 (11008, 4096)
model.layers.19.mlp.up_proj.weight
                                                                 172.00M
model.layers.19.mlp.up_proj.weight.grad
                                                 (11008, 4096)
                                                                 172.00M
model.layers.19.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                 172.00M
model.layers.19.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
model.layers.20.self_attn.q_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.20.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.20.self\_attn.k\_proj.weight
                                                                  64.00M
                                                  (4096, 4096)
model.layers.20.self attn.k proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.20.self attn.v proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.20.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.20.self_attn.o_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.20.self attn.o proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.20.mlp.gate proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.20.mlp.gate_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.20.mlp.up_proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.20.mlp.up_proj.weight.grad
                                                 (11008, 4096)
                                                                 172.00M
model.layers.20.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                 172.00M
model.layers.20.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
model.layers.21.self attn.q proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.21.self attn.q proj.weight.grad
                                                      (4096.4096)
                                                                      64.00M
model.layers.21.self attn.k proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.21.self attn.k proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.21.self_attn.v_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.21.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00
model.layers.21.self attn.o proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.21.self_attn.o_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.21.mlp.gate proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.21.mlp.gate_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.21.mlp.up proj.weight
                                                 (11008, 4096)
                                                                 172.00M
                                                 (11008, 4096)
model.layers.21.mlp.up proj.weight.grad
                                                                 172.00M
model.layers.21.mlp.down proj.weight
                                                 (4096, 11008)
                                                                 172.00M
model.layers.21.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
model.layers.22.self attn.q proj.weight
                                                  (4096, 4096)
                                                                  64.00M
                                                      (4096.4096)
                                                                       64.00M
model.layers.22.self_attn.q_proj.weight.grad
model.layers.22.self attn.k proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.22.self_attn.k_proj.weight.grad
                                                      (4096.4096)
                                                                       64.00M
model.layers.22.self attn.v proj.weight
                                                  (4096, 4096)
                                                                  64.00M
                                                                       64.00M
                                                      (4096, 4096)
model.layers.22.self_attn.v_proj.weight.grad
model.layers.22.self attn.o proj.weight
                                                  (4096, 4096)
                                                                  64.00M
                                                      (4096, 4096)
model.layers.22.self_attn.o_proj.weight.grad
                                                                      64.00M
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model.layers.22.mlp.gate proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.22.mlp.gate_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.22.mlp.up_proj.weight
                                                 (11008, 4096)
                                                                 172.00M
                                                 (11008, 4096)
model.layers.22.mlp.up proj.weight.grad
                                                                 172.00M
                                                 (4096, 11008)
                                                                 172.00M
model.layers.22.mlp.down proj.weight
model.layers.22.mlp.down proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
model.layers.23.self_attn.q_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.23.self attn.q proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.23.self_attn.k_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.23.self_attn.k_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.23.self_attn.v_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.23.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.23.self attn.o proj.weight
                                                  (4096, 4096)
                                                                  64.00M
                                                      (4096, 4096)
model.layers.23.self attn.o proj.weight.grad
                                                                       64.00M
model.layers.23.mlp.gate proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.23.mlp.gate_proj.weight.grad
                                                  (11008.4096)
                                                                  172.00M
model.layers.23.mlp.up proj.weight
                                                 (11008, 4096)
                                                                 172.00M
                                                 (11008, 4096)
model.layers.23.mlp.up proj.weight.grad
                                                                 172.00M
model.layers.23.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                 172.00M
model.layers.23.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
model.layers.24.self attn.q proj.weight
                                                  (4096, 4096)
                                                                  64.00M
                                                                       64.00M
model.layers.24.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
model.layers.24.self_attn.k_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.24.self_attn.k_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.24.self attn.v proj.weight
                                                                  64.00M
                                                  (4096.4096)
                                                      (4096, 4096)
                                                                      64.00M
model.layers.24.self_attn.v_proj.weight.grad
model.layers.24.self attn.o proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.24.self_attn.o_proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.24.mlp.gate proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.24.mlp.gate_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.24.mlp.up_proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.24.mlp.up_proj.weight.grad
                                                 (11008, 4096)
                                                                 172.00M
model.layers.24.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                 172.00M
                                                  (4096, 11008)
                                                                  172.00M
model.layers.24.mlp.down_proj.weight.grad
model.layers.25.self attn.q proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.25.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00
model.layers.25.self attn.k proj.weight
                                                                  64.00M
                                                  (4096, 4096)
                                                      (4096, 4096)
                                                                       64.00M
model.layers.25.self\_attn.k\_proj.weight.grad
model.layers.25.self_attn.v_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.25.self_attn.v_proj.weight.grad
                                                      (4096.4096)
                                                                       64.00M
model.layers.25.self_attn.o_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
{\tt model.layers.25.self\_attn.o\_proj.weight.grad}
                                                      (4096, 4096)
                                                                       64.00M
model.layers.25.mlp.gate proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.25.mlp.gate_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.25.mlp.up_proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.25.mlp.up_proj.weight.grad
                                                 (11008, 4096)
                                                                 172.00M
model.layers.25.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                 172.00M
                                                  (4096, 11008)
model.layers.25.mlp.down_proj.weight.grad
                                                                  172.00M
model.layers.26.self_attn.q_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
{\tt model.layers.26.self\_attn.q\_proj.weight.grad}
                                                      (4096.4096)
                                                                      64.00M
model.layers.26.self attn.k proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.26.self_attn.k_proj.weight.grad
                                                      (4096.4096)
                                                                       64.00M
model.layers.26.self_attn.v_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
                                                      (4096, 4096)
                                                                       64.00M
model.layers.26.self_attn.v_proj.weight.grad
model.layers.26.self attn.o proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.26.self attn.o proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.26.mlp.gate_proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.26.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.26.mlp.up_proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.26.mlp.up_proj.weight.grad
                                                 (11008, 4096)
                                                                 172.00M
model.layers.26.mlp.down_proj.weight
                                                 (4096, 11008)
                                                                 172.00M
model.layers.26.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
model.layers.27.self attn.q proj.weight
                                                  (4096.4096)
                                                                  64.00M
model.layers.27.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
                                                  (4096, 4096)
                                                                  64.00M
model.layers.27.self attn.k proj.weight
model.layers.27.self_attn.k_proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.27.self_attn.v_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.27.self attn.v proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.27.self_attn.o_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
model.layers.27.self attn.o proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
                                                 (11008, 4096)
                                                                 172.00M
model.layers.27.mlp.gate_proj.weight
model.layers.27.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
model.layers.27.mlp.up_proj.weight
                                                 (11008, 4096)
                                                                 172.00M
model.layers.27.mlp.up proj.weight.grad
                                                 (11008, 4096)
                                                                 172.00M
                                                 (4096, 11008)
model.layers.27.mlp.down_proj.weight
                                                                 172.00M
model.layers.27.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                  172.00M
                                                  (4096, 4096)
model.layers.28.self_attn.q_proj.weight
                                                                  64.00M
model.layers.28.self attn.q proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
model.layers.28.self_attn.k_proj.weight
                                                  (4096.4096)
                                                                  64.00M
model.layers.28.self attn.k proj.weight.grad
                                                      (4096, 4096)
                                                                       64.00M
                                                                  64.00M
                                                  (4096, 4096)
model.layers.28.self_attn.v_proj.weight
model.layers.28.self attn.v proj.weight.grad
                                                      (4096, 4096)
                                                                      64.00M
model.layers.28.self_attn.o_proj.weight
                                                  (4096, 4096)
                                                                  64.00M
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model.layers.28.self attn.o proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
model.layers.28.mlp.gate_proj.weight
                                                 (11008, 4096)
                                                                  172.00M
model.layers.28.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                   172.00M
                                                  (11008, 4096)
model.layers.28.mlp.up_proj.weight
                                                                  172.00M
model.layers.28.mlp.up_proj.weight.grad
                                                 (11008, 4096)
                                                                  172.00M
model.layers.28.mlp.down proj.weight
                                                  (4096, 11008)
                                                                  172.00M
model.layers.28.mlp.down proj.weight.grad
                                                   (4096, 11008)
                                                                   172.00M
model.layers.29.self attn.q proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.29.self_attn.q_proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
                                                                   64.00M
model.layers.29.self_attn.k_proj.weight
                                                   (4096, 4096)
model.layers.29.self_attn.k_proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
model.layers.29.self_attn.v_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.29.self attn.v proj.weight.grad
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                                                                       64.00M
                                                                   64.00M
model.layers.29.self attn.o proj.weight
                                                   (4096, 4096)
model.layers.29.self attn.o proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
                                                 (11008, 4096)
                                                                  172.00M
model.layers.29.mlp.gate_proj.weight
model.layers.29.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                   172.00M
                                                  (11008, 4096)
model.layers.29.mlp.up_proj.weight
                                                                  172.00M
model.layers.29.mlp.up_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
                                                 (4096, 11008)
model.layers.29.mlp.down_proj.weight
                                                                  172.00M
model.layers.29.mlp.down proj.weight.grad
                                                   (4096, 11008)
                                                                   172.00M
model.layers.30.self_attn.q_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.30.self attn.q proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
model.layers.30.self_attn.k_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.30.self attn.k proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
{\tt model.layers.30.self\_attn.v\_proj.weight}
                                                   (4096, 4096)
                                                                   64.00M
model.layers.30.self attn.v proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
model.layers.30.self_attn.o_proj.weight
                                                                   64.00M
                                                   (4096, 4096)
model.layers.30.self attn.o proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
                                                  (11008, 4096)
model.layers.30.mlp.gate_proj.weight
                                                                  172.00M
                                                  (11008, 4096)
model.layers.30.mlp.gate_proj.weight.grad
                                                                   172.00M
                                                 (11008, 4096)
model.layers.30.mlp.up_proj.weight
                                                                  172.00M
model.layers.30.mlp.up_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
{\tt model.layers.30.mlp.down\_proj.weight}
                                                  (4096, 11008)
                                                                  172.00M
model.layers.30.mlp.down proj.weight.grad
                                                   (4096, 11008)
                                                                   172.00M
model.layers.31.self_attn.q_proj.weight
                                                   (4096, 4096)
                                                                   64.00M
model.layers.31.self attn.q proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
                                                   (4096, 4096)
                                                                   64.00M
model.layers.31.self_attn.k_proj.weight
model.layers.31.self_attn.k_proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
model.layers.31.self_attn.v_proj.weight
                                                   (4096.4096)
                                                                   64.00M
model.layers.31.self_attn.v_proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
{\tt model.layers.31.self\_attn.o\_proj.weight}
                                                                   64.00M
                                                   (4096, 4096)
model.layers.31.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
                                                                       64.00M
model.layers.31.mlp.gate_proj.weight
                                                  (11008, 4096)
                                                                  172.00M
model.layers.31.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                   172.00M
model.layers.31.mlp.up_proj.weight
                                                  (11008, 4096)
                                                                  172.00M
model.layers.31.mlp.up_proj.weight.grad
                                                  (11008, 4096)
                                                                  172.00M
                                                 (4096, 11008)
                                                                  172.00M
model.layers.31.mlp.down_proj.weight
model.layers.31.mlp.down_proj.weight.grad
                                                   (4096, 11008)
                                                                   172.00M
Tensor85
                                                                  512.00B
                                                         (1, 2)
Tensor86
                                                         (1, 2)
                                                                  512.00B
                                                  (1, 2, 4096)
                                                                   32.00K
Tensor87
Tensor88
                                                   (1, 2, 4096)
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Tensor89
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Tensor90
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Tensor91
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Tensor93
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Tensor98
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Tensor99
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Tensor100
Tensor101
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Tensor102
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Tensor103
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Tensor105
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Tensor106
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Tensor107
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Tensor108
Tensor109
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Tensor110
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Tensor111
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Tensor112
Tensor113
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Tensor114
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Tensor115
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                                                                   32.00K
Tensor116
                                                   (1, 2, 4096)
Tensor117
                                                                   32.00K
                                                  (1, 2, 4096)
                                                                   32.00K
Tensor118
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Tensor119	(1,) 512.00B	
Tensor120	(1,) 512.00B	
Tensor121 model.layers.30.self attn.o proj.weight.grad	(1,) 512.00B (4096, 4096) 0.00B	
model.layers.30.mlp.gate proj.weight.grad	(11008, 4096) 0.00B	
model.layers.30.mlp.up proj.weight.grad	(11008, 4096) 0.00B	
model.layers.30.mlp.down_proj.weight.grad	(4096, 11008) 0.00B	
<pre>model.layers.30.input_layernorm.weight.grad</pre>	(4096,) 0.00B	
<pre>model.layers.30.post_attention_layernorm.weigh</pre>		0.00B
model.layers.31.self_attn.q_proj.weight.grad	(4096, 4096) 0.00B	
model.layers.31.self_attn.k_proj.weight.grad	(4096, 4096) 0.00B	
<pre>model.layers.31.self_attn.v_proj.weight.grad model.layers.31.self attn.o proj.weight.grad</pre>	(4096, 4096) 0.00B (4096, 4096) 0.00B	
model.layers.31.mlp.gate proj.weight.grad	(11008, 4096) 0.00B	
model.layers.31.mlp.up proj.weight.grad	(11008, 4096) 0.00B	
model.layers.31.mlp.down_proj.weight.grad	(4096, 11008) 0.00B	
<pre>model.layers.31.input_layernorm.weight.grad</pre>	(4096,) 0.00B	
model.layers.31.post_attention_layernorm.weigh		0.00B
model.norm.weight.grad lm head.weight.grad	(4096,) 0.00B	
Tensor122	(32000, 4096) 0.00B (1,) 512.00B	
Tensor123	(32000, 4096) 500.00M	
Tensor124	(32000, 4096) 500.00M	
Tensor125	(1,) 512.00B	
Tensor126	(4096, 4096) 64.00M	
Tensor127	(4096, 4096) 64.00M	
Tensor128 Tensor129	(1,) 512.00B (4096, 4096) 64.00M	
Tensor130	(4096, 4096) 64.00M	
Tensor131	(1,) 512.00B	
Tensor132	(4096, 4096) 64.00M	
Tensor133	(4096, 4096) 64.00M	
Tensor134	(1,) 512.00B	
Tensor135 Tensor136	(4096, 4096) 64.00M (4096, 4096) 64.00M	
Tensor137	(1,) 512.00B	
Tensor138	(11008, 4096) 172.00M	
Tensor139	(11008, 4096) 172.00M	
Tensor140	(1,) 512.00B	
Tensor141	(11008, 4096) 172.00M	
Tensor142 Tensor143	(11008, 4096) 172.00M (1,) 512.00B	
Tensor144	(4096, 11008) 172.00M	
Tensor145	(4096, 11008) 172.00M	
Tensor146	(1,) 512.00B	
Tensor147	(4096,) 16.00K	
Tensor148 Tensor149	(4096,) 16.00K (1,) 512.00B	
Tensor150	(1,) 512.00B (4096,) 16.00K	
Tensor151	(4096,) 16.00K	
Tensor152	(1,) 512.00B	
Tensor153	(4096, 4096) 64.00M	
Tensor154	(4096, 4096) 64.00M	
Tensor155 Tensor156	(1,) 512.00B (4096, 4096) 64.00M	
Tensor157	(4096, 4096) 64.00M	
Tensor158	(1,) 512.00B	
Tensor159	(4096, 4096) 64.00M	
Tensor160	(4096, 4096) 64.00M	
Tensor161	(1,) 512.00B	
Tensor162 Tensor163	(4096, 4096) 64.00M (4096, 4096) 64.00M	
Tensor164	(1,) 512.00B	
Tensor165	(11008, 4096) 172.00M	
Tensor166	(11008, 4096) 172.00M	
Tensor167	(1,) 512.00B	
Tensor168	(11008, 4096) 172.00M	
Tensor169 Tensor170	(11008, 4096) 172.00M (1,) 512.00B	
Tensor171	(4096, 11008) 172.00M	
Tensor172	(4096, 11008) 172.00M	
Tensor173	(1,) 512.00B	
Tensor174	(4096,) 16.00K	
Tensor175	(4096,) 16.00K	
Tensor176 Tensor177	(1,) 512.00B (4096,) 16.00K	
Tensor177 Tensor178	(4096,) 16.00K (4096,) 16.00K	
Tensor179	(1,) 512.00B	
Tensor180	(4096, 4096) 64.00M	
Tensor181	(4096, 4096) 64.00M	
Tensor182	(1,) 512.00B	
Tensor183 Tensor184	(4096, 4096) 64.00M (4096, 4096) 64.00M	
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Tensor185	(1,)	512.00B
Tensor186	(4096, 4096)	64.00M
Tensor187	(4096, 4096)	64.00M
Tensor188	(1,)	512.00B
Tensor189	(4096, 4096)	64.00M
Tensor190	(4096, 4096)	64.00M
Tensor191		512.00B
	(1,)	
Tensor192	(11008, 4096)	172.00M
Tensor193	(11008, 4096)	172.00M
Tensor194	(1,)	512.00B
Tensor195	(11008, 4096)	172.00M
Tensor196	(11008, 4096)	172.00M
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Tensor197	(1,)	512.00B
Tensor198	(4096, 11008)	172.00M
Tensor199	(4096, 11008)	172.00M
Tensor200	(1,)	512.00B
Tensor201	(4096,)	16.00K
Tensor202	(4096,)	16.00K
Tensor203	(1,)	512.00B
Tensor204	(4096,)	16.00K
Tensor205	(4096,)	16.00K
Tensor206	(1,)	512.00B
Tensor207	(4096, 4096)	64.00M
Tensor208	(4096, 4096)	64.00M
Tensor209	(1,)	512.00B
Tensor210	(4096, 4096)	64.00M
Tensor211	(4096, 4096)	64.00M
Tensor212	(1,)	512.00B
Tensor213	(4096, 4096)	64.00M
Tensor214	(4096, 4096)	64.00M
Tensor215	(1,)	512.00B
Tensor216	(4096, 4096)	64.00M
Tensor217	(4096, 4096)	64.00M
Tensor218	(1,)	512.00B
Tensor219	(11008, 4096)	172.00M
Tensor220	(11008, 4096)	172.00M
Tensor221	(1,)	512.00B
Tensor222	(11008, 4096)	172.00M
Tensor223	(11008, 4096)	172.00M
Tensor224	(1,)	512.00B
Tensor225	(4096, 11008)	172.00M
Tensor226	(4096, 11008)	172.00M
Tensor227		
	(1,)	512.00B
Tensor228	(4096,)	16.00K
Tensor229	(4096,)	16.00K
Tensor230	(1,)	512.00B
Tensor231	(4096,)	16.00K
Tensor232	(4096,)	16.00K
Tensor233	(1,)	512.00B
Tensor234	(4096, 4096)	64.00M
Tensor235	(4096, 4096)	64.00M
Tensor236	(1,)	512.00B
Tensor237	(4096, 4096)	64.00M
Tensor238	(4096, 4096)	
		64.00M
Tensor239	(1,)	512.00B
Tensor240	(4096, 4096)	64.00M
Tensor241	(4096, 4096)	64.00M
Tensor242	(1,)	512.00B
Tensor243	(4096, 4096)	64.00M
Tensor244	(4096, 4096)	64.00M
Tensor245	(1,)	512.00B
Tensor246	(11008, 4096)	172.00M
Tensor247	(11008, 4096)	172.00M
Tensor248	(1,)	512.00B
Tensor249	(11008, 4096)	172.00M
Tensor250	(11008, 4096)	172.00M
Tensor251	(1,)	512.00B
Tensor252	(4096, 11008)	172.00M
Tensor253	(4096, 11008)	172.00M
Tensor254	(1,)	512.00B
Tensor255	(4096,)	16.00K
Tensor256	(4096,)	16.00K
Tensor257	(1,)	512.00B
Tensor258	(4096,)	16.00K
Tensor259	(4096,)	16.00K
Tensor260	(1,)	512.00B
Tensor261	(4096, 4096)	64.00M
Tensor262	(4096, 4096)	64.00M
Tensor263	(1,)	512.00B
Tensor264	(4096, 4096)	64.00M
	(4096, 4096)	64.00M
Tensor265		
Tensor266	(1,)	512.00B
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Tensor268	(4096, 4096)	64.00M
Tensor269	(1,)	512.00B
Tensor270	(4096, 4096)	64.00M
Tensor271	(4096, 4096)	64.00M
Tensor272	(1,)	512.00B
Tensor273	(11008, 4096)	172.00M
Tensor274	(11008, 4096)	172.00M
Tensor275	(1,)	512.00B
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	(11008, 4096)	172.00M
Tensor277	(11008, 4096)	172.00M
Tensor278	(1,)	512.00B
Tensor279	(4096, 11008)	172.00M
Tensor280	(4096, 11008)	172.00M
Tensor281	(1,)	512.00B
Tensor282	(4096,)	16.00K
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Tensor284	(1,)	512.00B
Tensor285	(4096,)	16.00K
Tensor286	(4096,)	16.00K
Tensor287	(1,)	512.00B
Tensor288	(4096, 4096)	64.00M
Tensor289	(4096, 4096)	64.00M
Tensor290	(1,)	512.00B
Tensor291	(4096, 4096)	64.00M
Tensor292	(4096, 4096)	64.00M
Tensor293	(1,)	512.00B
Tensor294	(4096, 4096)	64.00M
Tensor295	(4096, 4096)	64.00M
Tensor296	(1,)	512.00B
Tensor297	(4096, 4096)	64.00M
Tensor298	(4096, 4096)	64.00M
Tensor299	(1,)	512.00B
Tensor300	(11008, 4096)	172.00M
Tensor301	(11008, 4096)	172.00M
Tensor302	(1,)	512.00B
Tensor303	(11008, 4096)	172.00M
Tensor304	(11008, 4096)	172.00M
Tensor305	(1,)	512.00B
Tensor306	(4096, 11008)	172.00M
Tensor307	(4096, 11008)	172.00M
Tensor308	(1,)	512.00B
Tensor309	(4096,)	16.00K
Tensor310	(4096,)	16.00K
Tensor311		
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Tensor312	(4096,)	16.00K
Tensor313	(4096,)	16.00K
Tensor314	(1,)	512.00B
Tensor315	(4096, 4096)	64.00M
Tensor316	(4096, 4096)	64.00M
Tensor317	(1,)	512.00B
Tensor318	(4096, 4096)	64.00M
Tensor319	(4096, 4096)	64.00M
Tensor320	(1,)	512.00B
Tensor321	(4096, 4096)	64.00M
Tensor322	(4096, 4096)	64.00M
Tensor323	(1,)	512.00B
Tensor324	(4096, 4096)	64.00M
Tensor325	(4096, 4096)	64.00M
Tensor326	(1,)	512.00B
Tensor327	(11008, 4096)	172.00M
Tensor328	(11008, 4096)	172.00M
Tensor329	(1,)	512.00B
Tensor330	(11008, 4096)	172.00M
Tensor331	(11008, 4096)	172.00M
Tensor332	(1,)	512.00B
Tensor333	(4096, 11008)	172.00M
Tensor334	(4096, 11008)	172.00M
Tensor335		512.00B
	(1,)	
Tensor336	(4096,)	16.00K
Tensor337	(4096,)	16.00K
Tensor338	(1,)	512.00B
Tensor339	(4096,)	16.00K
Tensor340	(4096,)	16.00K
Tensor341	(1,)	512.00B
Tensor342	(4096, 4096)	64.00M
Tensor343	(4096, 4096)	64.00M
Tensor344	(1,)	512.00B
Tensor345	(4096, 4096)	64.00M
Tensor346	(4096, 4096)	64.00M
Tensor347	(1,)	512.00B
Tensor348	(4096, 4096)	64.00M
Tensor349	(4096, 4096)	64.00M
Tensor350	(1,)	512.00B
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Tensor351
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Tensor352
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Tensor355
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Tensor358
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Tensor360
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Tensor361
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Tensor362
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Tensor363
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Tensor364
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Tensor367
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Tensor368
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Tensor370
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Tensor371
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Tensor372
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Tensor373
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Tensor374
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Tensor375
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Tensor376
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Tensor377
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                                                     (4096, 4096)
Tensor378
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Tensor379
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Tensor380
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                                                                     512.00B
Tensor381
                                                    (11008, 4096)
                                                                     172.00M
Tensor382
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Tensor383
                                                                     512.00B
                                                             (1.)
                                                    (11008, 4096)
Tensor384
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Tensor385
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Tensor386
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Tensor387
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                                                   (4096, 11008)
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Tensor388
Tensor389
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Tensor390
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                                                                      16.00K
Tensor391
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Tensor392
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                                                                     512.00B
Tensor393
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Tensor394
Tensor395
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Tensor396
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Tensor397
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Tensor398
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Tensor399
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Tensor400
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Tensor401
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                                                     (4096, 4096)
Tensor402
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Tensor403
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Tensor404
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Tensor405
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Tensor406
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Tensor407
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                                                                     512.00B
Tensor408
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                                                                     172.00M
Tensor409
                                                    (11008, 4096)
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Tensor410
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                                                             (1.)
                                                   (11008, 4096)
Tensor411
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Tensor412
                                                   (11008, 4096)
                                                                     172.00M
Tensor413
                                                             (1,)
                                                                     512.00B
                                                   (4096, 11008)
Tensor414
                                                                     172.00M
                                                   (4096, 11008)
Tensor415
                                                                     172.00M
Tensor416
                                                          (4096,)
                                                                     16.00K
Tensor417
                                                   (1, 2, 32000)
                                                                     250.00K
model.layers.10.input layernorm.weight.grad
                                                             (4096,)
                                                                          0.00B
                                                    (4096, 11008)
model.layers.10.mlp.down_proj.weight.grad
                                                                        0.00B
model.layers.10.mlp.up proj.weight.grad
                                                   (11008, 4096)
                                                                       0.00B
model.layers.10.mlp.gate_proj.weight.grad
                                                     (11008, 4096)
                                                                        0.00B
model.layers.10.self attn.o proj.weight.grad
                                                         (4096, 4096)
                                                                           0.00B
                                                                           0.00B
model.layers.10.self_attn.v_proj.weight.grad
                                                         (4096, 4096)
model.layers.10.self_attn.k_proj.weight.grad
model.layers.10.self_attn.q_proj.weight.grad
                                                         (4096, 4096)
                                                                           0.00B
                                                         (4096, 4096)
                                                                           0.00B
model.layers.9.post attention_layernorm.weight.grad
                                                                      (4096,)
                                                                                   0.00B
                                                            (4096.)
model.layers.9.input_layernorm.weight.grad
                                                                         0.00B
model.layers.9.mlp.down_proj.weight.grad
                                                   (4096, 11008)
                                                                       0.00B
                                                   (11008, 4096)
                                                                       0.00B
model.layers.9.mlp.up_proj.weight.grad
                                                   (11008, 4096)
                                                                       0.00B
model.layers.9.mlp.gate_proj.weight.grad
                                                                          0.00B
model.layers.9.self_attn.o_proj.weight.grad
                                                        (4096, 4096)
                                                                          0.00B
model.layers.9.self attn.v proj.weight.grad
                                                        (4096, 4096)
model.layers.9.self_attn.k_proj.weight.grad
                                                        (4096, 4096)
                                                                          0.00B
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model.layers.9.self attn.q proj.weight.grad
                                                      (4096, 4096)
                                                                        0.00B
                                                                                0.00B
model.layers.8.post_attention_layernorm.weight.grad
                                                                    (4096,)
                                                          (4096,)
                                                                       0.00B
model.layers.8.input layernorm.weight.grad
model.layers.8.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                     0.00B
                                                  (11008, 4096)
                                                                     0.00B
model.layers.8.mlp.up proj.weight.grad
model.layers.8.mlp.gate_proj.weight.grad
                                                  (11008, 4096)
                                                                     0.00B
                                                      (4096, 4096)
                                                                        0.00B
model.layers.8.self_attn.o_proj.weight.grad
model.layers.8.self attn.v proj.weight.grad
                                                      (4096, 4096)
                                                                        0.00B
model.layers.8.self_attn.k_proj.weight.grad
                                                      (4096, 4096)
                                                                        0.00B
model.layers.8.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
                                                                        0.00B
model.layers.7.post_attention_layernorm.weight.grad
                                                                    (4096,)
                                                                                0.00B
model.layers.7.input_layernorm.weight.grad
                                                          (4096,)
                                                                       0.00B
model.layers.7.mlp.down proj.weight.grad
                                                  (4096, 11008)
                                                                     0.00B
model.layers.7.mlp.up_proj.weight.grad
                                                  (11008, 4096)
                                                                     0.00B
model.layers.7.mlp.gate proj.weight.grad
                                                  (11008, 4096)
                                                                     0.00B
model.layers.7.self_attn.o_proj.weight.grad
                                                      (4096, 4096)
                                                                        0.00B
model.layers.7.self attn.v proj.weight.grad
                                                      (4096, 4096)
                                                                        0.00B
                                                                        0.00B
model.layers.7.self_attn.k_proj.weight.grad
                                                      (4096, 4096)
{\tt model.layers.7.self\_attn.q\_proj.weight.grad}
                                                      (4096, 4096)
                                                                        0.00B
model.layers.6.post_attention_layernorm.weight.grad
                                                                    (4096,)
                                                                                0.00B
model.layers.6.input layernorm.weight.grad
                                                          (4096,)
                                                                       0.00B
                                                  (4096, 11008)
model.layers.6.mlp.down_proj.weight.grad
                                                                     0.00B
model.layers.6.mlp.up proj.weight.grad
                                                  (11008, 4096)
                                                                     0.00B
                                                  (11008, 4096)
                                                                     0.00B
model.layers.6.mlp.gate_proj.weight.grad
                                                      (4096, 4096)
model.layers.6.self attn.o proj.weight.grad
                                                                        0.00B
                                                                        0.00B
                                                      (4096, 4096)
model.layers.6.self_attn.v_proj.weight.grad
model.layers.6.self attn.k proj.weight.grad
                                                      (4096, 4096)
                                                                        0.00B
{\tt model.layers.6.self\_attn.q\_proj.weight.grad}
                                                      (4096, 4096)
                                                                        0.00B
                                                                    (4096,)
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model.layers.5.post attention_layernorm.weight.grad
                                                          (4096,)
model.layers.5.input_layernorm.weight.grad
                                                                       0.00B
                                                  (4096, 11008)
model.layers.5.mlp.down_proj.weight.grad
                                                                     0.00B
{\tt model.layers.5.mlp.up\_proj.weight.grad}
                                                  (11008, 4096)
                                                                     0.00B
                                                  (11008, 4096)
                                                                     0.00B
model.layers.5.mlp.gate_proj.weight.grad
                                                                        0.00B
model.layers.5.self_attn.o_proj.weight.grad
                                                      (4096, 4096)
                                                      (4096, 4096)
model.layers.5.self attn.v proj.weight.grad
                                                                        0.00B
model.layers.5.self_attn.k_proj.weight.grad
                                                      (4096, 4096)
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                                                      (4096, 4096)
model.layers.5.self attn.q proj.weight.grad
                                                                        0.00B
                                                                    (4096,)
                                                                                0.00B
{\tt model.layers.4.post\_attention\_layernorm.weight.grad}
                                                          (4096,)
model.layers.4.input_layernorm.weight.grad
                                                                       0.00B
{\tt model.layers.4.mlp.down\_proj.weight.grad}
                                                  (4096, 11008)
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                                                  (11008, 4096)
model.layers.4.mlp.up_proj.weight.grad
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                                                  (11008, 4096)
model.layers.4.mlp.gate_proj.weight.grad
model.layers.4.self attn.o proj.weight.grad
                                                      (4096.4096)
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model.layers.4.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
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model.layers.4.self attn.k proj.weight.grad
                                                      (4096, 4096)
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                                                      (4096, 4096)
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model.layers.4.self_attn.q_proj.weight.grad
model.layers.3.post attention_layernorm.weight.grad
                                                                    (4096,)
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model.layers.3.input layernorm.weight.grad
                                                          (4096,)
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model.layers.3.mlp.down_proj.weight.grad
                                                  (4096, 11008)
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                                                  (11008, 4096)
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model.layers.3.mlp.up_proj.weight.grad
model.layers.3.mlp.gate_proj.weight.grad
                                                  (11008, 4096)
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                                                      (4096, 4096)
model.layers.3.self_attn.o_proj.weight.grad
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model.layers.3.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
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model.layers. 3. self\_attn.k\_proj.weight.grad
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model.layers.3.self_attn.q_proj.weight.grad
                                                      (4096, 4096)
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                                                                    (4096,)
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model.layers.2.post attention layernorm.weight.grad
model.layers.2.input_layernorm.weight.grad
                                                          (4096,)
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model.layers.2.mlp.down_proj.weight.grad
                                                  (4096, 11008)
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model.layers.2.mlp.up_proj.weight.grad
                                                  (11008, 4096)
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                                                  (11008, 4096)
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model.layers.2.mlp.gate_proj.weight.grad
model.layers.2.self_attn.o_proj.weight.grad
                                                      (4096, 4096)
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model.layers.2.self_attn.v_proj.weight.grad
model.layers.2.self_attn.k_proj.weight.grad
                                                      (4096, 4096)
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                                                      (4096, 4096)
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model.layers.2.self attn.q proj.weight.grad
                                                      (4096, 4096)
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                                                                    (4096,)
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model.layers.1.post_attention_layernorm.weight.grad
model.layers.1.input_layernorm.weight.grad
                                                          (4096,)
                                                                       0.00B
                                                  (4096, 11008)
model.layers.1.mlp.down_proj.weight.grad
                                                                     0.00B
model.layers.1.mlp.up proj.weight.grad
                                                  (11008, 4096)
                                                                     0.00B
model.layers.1.mlp.gate_proj.weight.grad
                                                  (11008, 4096)
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model.layers.1.self_attn.o_proj.weight.grad
                                                      (4096, 4096)
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model.layers.1.self_attn.v_proj.weight.grad
                                                      (4096, 4096)
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model.layers.1.self attn.k proj.weight.grad
                                                      (4096, 4096)
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model.layers.1.self_attn.q_proj.weight.grad
                                                      (4096.4096)
                                                                        0.00B
model.layers.0.post_attention_layernorm.weight.grad
                                                                    (4096,)
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model.layers.0.input layernorm.weight.grad
                                                          (4096,)
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model.layers.0.mlp.down_proj.weight.grad
                                                  (4096, 11008)
                                                                     0.00B
                                                  (11008, 4096)
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model.layers.0.mlp.up_proj.weight.grad
model.layers.0.mlp.gate_proj.weight.grad
                                                  (11008, 4096)
                                                                     0.00B
{\tt model.layers.0.self\_attn.o\_proj.weight.grad}
                                                      (4096, 4096)
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model.layers.0.self attn.v proj.weight.grad
                                                      (4096, 4096)
                                                                        0.00B
                                                      (4096, 4096)
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model.layers.0.self_attn.k_proj.weight.grad
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model.layers.0.self attn.q proj.weight.grad
                                                      (4096, 4096)
                                                  (32000, 4096)
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model.embed_tokens.weight.grad
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Tensor422	(1,)	512.00B
Tensor423	(4096,)	16.00K
Tensor424	(4096,)	
	*	16.00K
Tensor425	(1,)	512.00B
Tensor426	(4096, 4096)	64.00M
Tensor427	(4096, 4096)	64.00M
Tensor428	(1,)	512.00B
Tensor429	(4096, 4096)	64.00M
Tensor430	(4096, 4096)	64.00M
Tensor431	(1,)	512.00B
Tensor432	(4096, 4096)	64.00M
Tensor433	(4096, 4096)	64.00M
Tensor434	(1,)	512.00B
Tensor435	(4096, 4096)	64.00M
Tensor436	(4096, 4096)	64.00M
Tensor437 Tensor438	(1,)	512.00B
	(11008, 4096)	172.00M
Tensor439	(11008, 4096)	172.00M
Tensor440	(1,)	512.00B
Tensor441	(11008, 4096)	172.00M
Tensor442	(11008, 4096)	172.00M
Tensor443	(1,)	512.00B
Tensor444	(4096, 11008)	172.00M
Tensor445	(4096, 11008)	172.00M
Tensor446	(1,)	512.00B
Tensor447	(4096,)	16.00K
Tensor448	(4096,)	16.00K
Tensor449		
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Tensor450	(4096,)	16.00K
Tensor451	(4096,)	16.00K
Tensor452	(1,)	512.00B
Tensor453	(4096, 4096)	64.00M
Tensor454	(4096, 4096)	64.00M
Tensor455	(1,)	512.00B
Tensor456	(4096, 4096)	64.00M
Tensor457	(4096, 4096)	64.00M
Tensor458	(1,)	512.00B
Tensor459	(4096, 4096)	64.00M
Tensor460	(4096, 4096)	64.00M
Tensor461		512.00B
	(1,)	64.00M
Tensor462	(4096, 4096)	
Tensor463	(4096, 4096)	64.00M
Tensor464	(1,)	512.00B
Tensor465	(11008, 4096)	172.00M
Tensor466	(11008, 4096)	172.00M
Tensor467	(1,)	512.00B
Tensor468	(11008, 4096)	172.00M
Tensor469	(11008, 4096)	172.00M
Tensor470	(1,)	512.00B
Tensor471	(4096, 11008)	172.00M
Tensor472	(4096, 11008)	172.00M
Tensor473	(1,)	512.00B
Tensor474	(4096,)	16.00K
Tensor475	(4096,)	16.00K
Tensor476	(1,)	512.00B
Tensor477	(4096,)	16.00K
Tensor478	(4096,)	16.00K
Tensor479	(1,)	512.00B
Tensor480		
Tensor481	(4096, 4096) (4096, 4096)	64.00M 64.00M
Tensor482	(1,)	512.00B
Tensor483	(4096, 4096)	64.00M
Tensor484	(4096, 4096)	64.00M
Tensor485	(1,)	512.00B
Tensor486	(4096, 4096)	64.00M
Tensor487	(4096, 4096)	64.00M
Tensor488	(1,)	512.00B
Tensor489	(4096, 4096)	64.00M
Tensor490	(4096, 4096)	64.00M
Tensor491	(1,)	512.00B
Tensor492	(11008, 4096)	172.00M
Tensor493	(11008, 4096)	172.00M
Tensor494		512.00H
	(1,)	
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Tensor496	(11008, 4096)	172.00M
Tensor497	(1,)	512.00B
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Tensor499	(4096, 11008)	172.00M
Tensor500	(1,)	512.00B

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Tensor505	(4096,)	16.00K
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Tensor508	(4096, 4096)	64.00M
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Tensor510	(4096, 4096)	64.00M
Tensor511	(4096, 4096)	64.00M
Tensor512	(1,)	512.00B
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Tensor514		
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Tensor516	(4096, 4096)	64.00M
Tensor517	(4096, 4096)	64.00M
Tensor518	(1,)	512.00B
Tensor519	(11008, 4096)	172.00M
Tensor520	(11008, 4096)	172.00M
Tensor521	(1,)	512.00B
Tensor522	(11008, 4096)	172.00M
Tensor523	(11008, 4096)	172.00M
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Tensor532	(4096,)	16.00K
Tensor533	(1,)	512.00B
Tensor534	(4096, 4096)	64.00M
Tensor535	(4096, 4096)	64.00M
Tensor536	(1,)	512.00B
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Tensor546	(11008, 4096)	172.00M
Tensor547	(11008, 4096)	172.00M
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Tensor553	(4096, 11008)	172.00M
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Tensor555	(4096,)	16.00K
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Tensor557	(1,)	512.00B
Tensor558	(4096,)	16.00K
Tensor559	(4096,)	16.00K
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Tensor563	(1,)	512.00B
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Tensor567	(4096, 4096)	64.00M
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Tensor569	(1,)	512.00B
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Tensor573	(11008, 4096)	172.00M
Tensor574	(11008, 4096)	172.00M
Tensor575	(1,)	512.00B
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Tensor577	(11008, 4096)	172.00M
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Tensor580	(4096, 11008)	172.00M
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Tensor583	(4096,)	16.00K

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Tensor599	(1,)	512.00B
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Tensor688	(4096, 11008)	172.00M
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Tensor696	(4096, 4096)	64.00M
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Tensor699	(4096, 4096)	64.00M
Tensor700	(4096, 4096)	64.00M
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Tensor704	(1,)	512.00B
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Tensor706	(4096, 4096)	
		64.00M
Tensor707	(1,)	512.00B
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Tensor709	(11008, 4096)	172.00M
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Tensor718	(4096,)	16.00K
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Tensor720	(4096,)	16.00K
Tensor721	(4096,)	16.00K
Tensor722	(1,)	512.00B
Tensor723	(4096, 4096)	64.00M
Tensor724	(4096, 4096)	64.00M
Tensor725	• • • • • • • • • • • • • • • • • • • •	512.00B
Tensor726	(1,) (4096, 4096)	64.00M
Tensor726		
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Tensor728	(1,)	512.00B
Tensor729	(4096, 4096)	64.00M
Tensor730	(4096, 4096)	64.00M
Tensor731	(1,)	512.00B
Tensor732	(4096, 4096)	64.00M
Tensor733	(4096, 4096)	64.00M
Tensor734	(1,)	512.00B
Tensor735	(11008, 4096)	172.00M
Tensor736	(11008, 4096)	172.00M
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Tensor739	(11008, 4096)	172.00M
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Tensor742	(4096, 11008)	172.00M
Tensor743	(1,)	512.00B
Tensor744	(4096,)	16.00K
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Tensor748	(4096,)	16.00K
Tensor749	(1,)	512.00B

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Tensor755	(1,)	512.00B
Tensor756		
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Tensor758	(1,)	512.00B
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Tensor760	(4096, 4096)	64.00M
Tensor761	(1,)	512.00B
Tensor762	(11008, 4096)	172.00M
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Tensor764	(1,)	512.00B
Tensor765	(11008, 4096)	172.00M
Tensor766	(11008, 4096)	172.00M
Tensor767		512.00H
	(1,)	
Tensor768	(4096, 11008)	172.00M
Tensor769	(4096, 11008)	172.00M
Tensor770	(1,)	512.00B
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Tensor775	(4096,)	16.00K
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Tensor778	(4096, 4096)	64.00M
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Tensor781	(4096, 4096)	64.00M
Tensor782	(1,)	512.00B
Tensor783	(4096, 4096)	64.00M
Tensor784	(4096, 4096)	64.00M
Tensor785	(1,)	512.00B
Tensor786	(4096, 4096)	64.00M
Tensor787	(4096, 4096)	64.00M
Tensor788	(1,)	512.00B
Tensor789	(11008, 4096)	172.00M
Tensor790	(11008, 4096)	172.00M
Tensor791		
	(1,)	512.00B
Tensor792	(11008, 4096)	172.00M
Tensor793	(11008, 4096)	172.00M
Tensor794	(1,)	512.00B
Tensor795	(4096, 11008)	172.00M
Tensor796	(4096, 11008)	172.00M
Tensor797	(1,)	512.00B
Tensor798	(4096,)	16.00K
Tensor799	(4096,)	16.00K
Tensor800	(1,)	512.00B
Tensor801	(4096,)	16.00K
Tensor802	(4096,)	16.00K
Tensor803	(1,)	512.00B
Tensor804	(4096, 4096)	64.00M
Tensor805	(4096, 4096)	64.00M
Tensor806	(1,)	512.00B
Tensor807	(4096, 4096)	64.00M
Tensor808	(4096, 4096)	64.00M
Tensor809	(1,)	512.00B
Tensor810	(4096, 4096)	64.00M
Tensor811	(4096, 4096)	64.00M
Tensor812	(1,)	512.00B
Tensor813	(4096, 4096)	64.00M
Tensor814	(4096, 4096)	64.00M
Tensor815	(1,)	512.00B
Tensor816	(11008, 4096)	172.00M
Tensor817	(11008, 4096)	172.00M
Tensor818	(1,)	512.00B
Tensor819	(11008, 4096)	172.00M
Tensor820	(11008, 4096)	172.00M
Tensor821		
	(1,)	512.00B
Tensor822	(4096, 11008)	172.00M
Tensor823	(4096, 11008)	172.00M
Tensor824	(1,)	512.00B
Tensor825	(4096,)	16.00K
Tensor826	(4096,)	16.00K
Tensor827	(1,)	512.00B
Tensor828	(4096,)	16.00K
Tensor829	(4096,)	16.00K
Tensor830	(1,)	512.00B
Tensor831	(4096, 4096)	64.00M
Tensor832	(4096, 4096)	64.00M
1011301032	(4030, 4030)	04.001

Tensor833	(1,)	512.00B
Tensor834	(4096, 4096)	64.00M
Tensor835	(4096, 4096)	64.00M
Tensor836	(1,)	512.00B
Tensor837	(4096, 4096)	
Tensor838	(4096, 4096)	
Tensor839	(1,)	
Tensor840	(4096, 4096)	
Tensor841	(4096, 4096)	
Tensor842	(1,)	
Tensor843		
	(11008, 4096)	
Tensor844	(11008, 4096)	
Tensor845	(1,)	
Tensor846	(11008, 4096)	
Tensor847	(11008, 4096)	
Tensor848	(1,)	
Tensor849	(4096, 11008)	
Tensor850	(4096, 11008)	172.00M
Tensor851	(1,)	
Tensor852	(4096,)	16.00K
Tensor853	(4096,)	16.00K
Tensor854	(1,)	512.00B
Tensor855	(4096,)	16.00K
Tensor856	(4096,)	16.00K
Tensor857	(1,)	512.00B
Tensor858	(4096, 4096)	
Tensor859	(4096, 4096)	
Tensor860	(1,)	
Tensor861	(4096, 4096)	
Tensor862	(4096, 4096)	
Tensor863		
	(1,)	
Tensor864	(4096, 4096)	
Tensor865	(4096, 4096)	
Tensor866	(1,)	
Tensor867	(4096, 4096)	
Tensor868	(4096, 4096)	
Tensor869	(1,)	
Tensor870	(11008, 4096)	
Tensor871	(11008, 4096)	172.00M
Tensor872	(1,)	512.00B
Tensor873	(11008, 4096)	
Tensor874	(11008, 4096)	172.00M
Tensor875	(1,)	512.00B
Tensor876	(4096, 11008)	172.00M
Tensor877	(4096, 11008)	172.00M
Tensor878	(1,)	
Tensor879	(4096,)	
Tensor880	(4096,)	
Tensor881	(1,)	
Tensor882	(4096,)	
Tensor883	(4096,)	
Tensor884	(1,)	
Tensor885	(4096, 4096)	
Tensor886	(4096, 4096)	
Tensor887		
Tensor888	(1,) (4096, 4096)	
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Tensor889	(4096, 4096)	
Tensor890	(1,)	
Tensor891	(4096, 4096)	
Tensor892	(4096, 4096)	
Tensor893	(1,)	
Tensor894	(4096, 4096)	
Tensor895	(4096, 4096)	
Tensor896	(1,)	
Tensor897	(11008, 4096)	
Tensor898	(11008, 4096)	
Tensor899	(1,)	512.00B
Tensor900	(11008, 4096)	
Tensor901	(11008, 4096)	172.00M
Tensor902	(1,)	512.00B
Tensor903	(4096, 11008)	172.00M
Tensor904	(4096, 11008)	172.00M
Tensor905	(1,)	512.00B
Tensor906	(4096,)	
Tensor907	(4096,)	
Tensor908	(1,)	
Tensor909	(4096,)	
Tensor910	(4096,)	
Tensor911	(1,)	
Tensor912	(4096, 4096)	
Tensor913	(4096, 4096)	
Tensor914	(1,)	
Tensor914	(4096, 4096)	
1 = 11201 313	(4090, 4090)	04.00M

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Tensor916
                                                   (4096, 4096)
                                                                    64.00M
Tensor917
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                                                                   512.00B
Tensor918
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Tensor919
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Tensor920
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                                                           (1.)
Tensor921
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Tensor922
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Tensor923
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Tensor924
                                                  (11008, 4096)
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Tensor925
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Tensor926
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Tensor927
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Tensor928
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Tensor929
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Tensor930
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                                                  (4096, 11008)
Tensor931
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Tensor932
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                                                                   512.00B
                                                        (4096,)
Tensor933
                                                                    16.00K
Tensor934
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Tensor935
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Tensor936
                                                        (4096,)
                                                                    16.00K
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Tensor937
                                                                    16.00K
Tensor938
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                                                                   512.00B
                                                   (4096, 4096)
Tensor939
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Tensor940
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Tensor941
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Tensor942
                                                   (4096, 4096)
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Tensor943
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Tensor944
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model.layers.30.self_attn.v_proj.weight.grad
                                                       (4096, 4096)
                                                                         0.00B
model.layers.30.self attn.k proj.weight.grad
                                                       (4096, 4096)
                                                                         0.00B
model.layers.30.self_attn.q_proj.weight.grad
                                                       (4096.4096)
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                                                                     (4096,)
                                                                                  0.00B
model.layers.29.post attention layernorm.weight.grad
                                                           (4096,)
{\tt model.layers.29.input\_layernorm.weight.grad}
                                                                        0.00B
model.layers.29.mlp.down proj.weight.grad
                                                   (4096, 11008)
                                                                      0.00B
                                                  (11008, 4096)
model.layers.29.mlp.up_proj.weight.grad
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model.layers.29.mlp.gate_proj.weight.grad
                                                   (11008, 4096)
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{\tt model.layers.29.self\_attn.o\_proj.weight.grad}
                                                       (4096, 4096)
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model.layers.29.self_attn.v_proj.weight.grad
                                                       (4096, 4096)
{\tt model.layers.29.self\_attn.k\_proj.weight.grad}
                                                       (4096, 4096)
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model.layers.29.self_attn.q_proj.weight.grad
                                                       (4096, 4096)
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                                                                     (4096,)
                                                                                  0.00B
{\tt model.layers.28.post\_attention\_layernorm.weight.grad}
model.layers.28.input layernorm.weight.grad
                                                           (4096,)
                                                                        0.00B
model.layers.28.mlp.down_proj.weight.grad
                                                   (4096, 11008)
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model.layers.28.mlp.up_proj.weight.grad
                                                  (11008, 4096)
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                                                   (11008, 4096)
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model.layers.28.mlp.gate_proj.weight.grad
model.layers.28.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
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model.layers.28.self_attn.v_proj.weight.grad
                                                       (4096, 4096)
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model.layers.28.self_attn.k_proj.weight.grad
                                                       (4096, 4096)
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                                                       (4096, 4096)
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{\tt model.layers.28.self\_attn.q\_proj.weight.grad}
model.layers.27.post_attention_layernorm.weight.grad
                                                                     (4096,)
                                                                                  0.00B
                                                           (4096,)
model.layers.27.input layernorm.weight.grad
                                                                        0.00B
model.layers.27.mlp.down proj.weight.grad
                                                   (4096, 11008)
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model.layers.27.mlp.up_proj.weight.grad
                                                                     0.00B
                                                  (11008.4096)
model.layers.27.mlp.gate proj.weight.grad
                                                   (11008, 4096)
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model.layers.27.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
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model.layers.27.self_attn.v_proj.weight.grad
                                                       (4096, 4096)
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model.layers.27.self\_attn.k\_proj.weight.grad
                                                       (4096, 4096)
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{\tt model.layers.27.self\_attn.q\_proj.weight.grad}
                                                       (4096, 4096)
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model.layers.26.post attention layernorm.weight.grad
                                                                     (4096,)
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model.layers.26.input layernorm.weight.grad
                                                           (4096.)
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model.layers.26.mlp.down proj.weight.grad
                                                   (4096, 11008)
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model.layers.26.mlp.up proj.weight.grad
                                                  (11008.4096)
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model.layers.26.mlp.gate proj.weight.grad
                                                   (11008, 4096)
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model.layers.26.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
model.layers.26.self_attn.v_proj.weight.grad
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model.layers.26.self_attn.k_proj.weight.grad
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model.layers.26.self_attn.q_proj.weight.grad
                                                       (4096, 4096)
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                                                                     (4096,)
model.layers.25.post_attention_layernorm.weight.grad
                                                                                  0.00B
model.layers.25.input layernorm.weight.grad
                                                           (4096,)
                                                                        0.00B
                                                   (4096, 11008)
model.layers.25.mlp.down_proj.weight.grad
                                                                      0.00B
model.layers.25.mlp.up proj.weight.grad
                                                  (11008.4096)
                                                                     0.00B
model.layers.25.mlp.gate proj.weight.grad
                                                   (11008, 4096)
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model.layers.25.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
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model.layers.25.self attn.v proj.weight.grad
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model.layers.25.self attn.k proj.weight.grad
                                                       (4096, 4096)
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                                                       (4096, 4096)
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model.layers.25.self_attn.q_proj.weight.grad
model.layers.24.post attention layernorm.weight.grad
                                                                     (4096,)
                                                                                  0.00B
                                                           (4096,)
                                                                        0.00B
model.layers.24.input_layernorm.weight.grad
                                                   (4096, 11008)
                                                                      0.00B
model.layers.24.mlp.down_proj.weight.grad
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model.layers.24.mlp.up_proj.weight.grad
                                                  (11008, 4096)
model.layers.24.mlp.gate proj.weight.grad
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model.layers.24.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
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{\tt model.layers.24.self\_attn.v\_proj.weight.grad}
                                                       (4096, 4096)
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model.layers.24.self_attn.k_proj.weight.grad
                                                       (4096, 4096)
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{\tt model.layers.24.self\_attn.q\_proj.weight.grad}
                                                       (4096, 4096)
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model.layers.23.post_attention_layernorm.weight.grad
                                                                     (4096.)
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                                                           (4096,)
                                                                        0.00B
model.layers.23.input layernorm.weight.grad
model.layers.23.mlp.down proj.weight.grad
                                                   (4096, 11008)
                                                                     0.00B
model.layers.23.mlp.up_proj.weight.grad
                                                  (11008, 4096)
                                                                    0.00B
model.layers.23.mlp.gate proj.weight.grad
                                                   (11008, 4096)
                                                                     0.00B
model.layers.23.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
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model.layers.23.self_attn.v_proj.weight.grad
                                                       (4096, 4096)
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model.layers.23.self\_attn.k\_proj.weight.grad
                                                       (4096, 4096)
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model.layers.23.self_attn.q_proj.weight.grad
                                                       (4096, 4096)
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model.layers.22.post attention layernorm.weight.grad
                                                                     (4096,)
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model.layers.22.input layernorm.weight.grad
                                                           (4096.)
                                                                        0.00B
model.layers.22.mlp.down proj.weight.grad
                                                   (4096, 11008)
                                                                     0.00B
model.layers.22.mlp.up proj.weight.grad
                                                 (11008.4096)
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model.layers.22.mlp.gate proj.weight.grad
                                                   (11008, 4096)
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model.layers.22.self attn.o proj.weight.grad
                                                       (4096, 4096)
model.layers.22.self_attn.v_proj.weight.grad
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model.layers.22.self_attn.k_proj.weight.grad
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model.layers.22.self attn.q proj.weight.grad
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model.layers.21.post_attention_layernorm.weight.grad
model.layers.21.input layernorm.weight.grad
                                                           (4096,)
                                                                        0.00B
                                                   (4096, 11008)
model.layers.21.mlp.down_proj.weight.grad
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model.layers.21.mlp.up proj.weight.grad
                                                  (11008.4096)
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                                                   (11008, 4096)
model.layers.21.mlp.gate_proj.weight.grad
model.layers.21.self attn.o proj.weight.grad
                                                       (4096, 4096)
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model.layers.21.self_attn.v_proj.weight.grad
                                                       (4096, 4096)
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model.layers.21.self attn.k proj.weight.grad
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model.layers.21.self_attn.q_proj.weight.grad
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model.layers.20.post attention layernorm.weight.grad
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model.layers.20.input layernorm.weight.grad
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                                                   (4096, 11008)
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model.layers.20.mlp.down_proj.weight.grad
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                                                  (11008, 4096)
model.layers.20.mlp.up_proj.weight.grad
model.layers.20.mlp.gate proj.weight.grad
                                                   (11008, 4096)
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model.layers.20.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
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model.layers.20.self attn.v proj.weight.grad
                                                       (4096, 4096)
model.layers.20.self_attn.k_proj.weight.grad
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                                                       (4096, 4096)
model.layers.20.self_attn.q_proj.weight.grad
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                                                                    (4096.)
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model.layers.19.post_attention_layernorm.weight.grad
\verb|model.layers.19.input_layernorm.weight.grad|\\
                                                           (4096,)
                                                                        0.00B
                                                   (4096, 11008)
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model.layers.19.mlp.down_proj.weight.grad
model.layers.19.mlp.up proj.weight.grad
                                                  (11008, 4096)
                                                                    0.00B
                                                   (11008, 4096)
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model.layers.19.mlp.gate_proj.weight.grad
model.layers.19.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
                                                                         0.00B
                                                       (4096, 4096)
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model.layers.19.self_attn.v_proj.weight.grad
model.layers.19.self_attn.k_proj.weight.grad
                                                       (4096, 4096)
                                                                        0.00B
{\tt model.layers.19.self\_attn.q\_proj.weight.grad}
                                                       (4096, 4096)
                                                                        0.00B
model.layers.18.post attention layernorm.weight.grad
                                                                     (4096,)
                                                                                 0.00B
                                                           (4096,)
                                                                        0.00B
model.layers.18.input_layernorm.weight.grad
model.layers.18.mlp.down_proj.weight.grad
                                                   (4096, 11008)
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                                                  (11008.4096)
                                                                    0.00B
model.layers.18.mlp.up_proj.weight.grad
model.layers.18.mlp.gate_proj.weight.grad
                                                   (11008, 4096)
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model.layers.18.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
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model.layers.18.self attn.v proj.weight.grad
                                                       (4096, 4096)
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model.layers.18.self_attn.k_proj.weight.grad
                                                       (4096, 4096)
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model.layers.18.self_attn.q_proj.weight.grad
                                                       (4096, 4096)
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model.layers.17.post attention layernorm.weight.grad
                                                                     (4096,)
                                                                                 0.00B
model.layers.17.input_layernorm.weight.grad
                                                           (4096,)
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model.layers.17.mlp.down_proj.weight.grad
                                                   (4096, 11008)
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model.layers.17.mlp.up_proj.weight.grad
                                                 (11008, 4096)
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model.layers.17.mlp.gate proj.weight.grad
                                                   (11008, 4096)
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model.layers.17.self attn.o proj.weight.grad
                                                       (4096, 4096)
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model.layers.17.self attn.v proj.weight.grad
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model.layers.17.self_attn.k_proj.weight.grad
                                                       (4096, 4096)
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model.layers.17.self_attn.q_proj.weight.grad
                                                       (4096, 4096)
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model.layers.16.post_attention_layernorm.weight.grad
                                                                     (4096,)
                                                                                 0.00B
model.layers.16.input layernorm.weight.grad
                                                           (4096,)
                                                                        0.00B
model.layers.16.mlp.down_proj.weight.grad
                                                   (4096, 11008)
                                                                     0.00B
model.layers.16.mlp.up proj.weight.grad
                                                  (11008, 4096)
                                                                    0.00B
model.layers.16.mlp.gate_proj.weight.grad
                                                   (11008, 4096)
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model.layers.16.self attn.o proj.weight.grad
                                                       (4096, 4096)
                                                                         0.00B
model.layers.16.self_attn.v_proj.weight.grad
                                                       (4096, 4096)
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model.layers.16.self_attn.k_proj.weight.grad
model.layers.16.self_attn.q_proj.weight.grad
                                                       (4096, 4096)
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                                                       (4096, 4096)
                                                                        0.00B
model.layers.15.post attention layernorm.weight.grad
                                                                     (4096,)
                                                                                 0.00B
                                                           (4096,)
model.layers.15.input_layernorm.weight.grad
                                                                        0.00B
model.layers.15.mlp.down_proj.weight.grad
                                                   (4096, 11008)
                                                                     0.00B
                                                                    0.00B
model.layers.15.mlp.up_proj.weight.grad
                                                 (11008, 4096)
                                                   (11008, 4096)
model.layers.15.mlp.gate_proj.weight.grad
                                                                     0.00B
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model.layers.15.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
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model.layers.15.self attn.v proj.weight.grad
                                                       (4096, 4096)
                                                       (4096, 4096)
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model.layers.15.self_attn.k_proj.weight.grad
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model.layers.15.self attn.q proj.weight.grad
                                                       (4096, 4096)
                                                                         0.00B
model.layers.14.post attention layernorm.weight.grad
                                                                     (4096,)
                                                                                 0.00B
model.layers.14.input_layernorm.weight.grad
                                                           (4096,)
                                                                        0.00B
model.layers.14.mlp.down_proj.weight.grad
                                                   (4096, 11008)
                                                                      0.00B
model.layers.14.mlp.up_proj.weight.grad
                                                  (11008, 4096)
                                                                     0.00B
model.layers.14.mlp.gate_proj.weight.grad
                                                   (11008, 4096)
                                                                      0.00B
model.layers.14.self attn.o proj.weight.grad
                                                       (4096, 4096)
                                                                         0.00B
model.layers.14.self attn.v proj.weight.grad
                                                       (4096, 4096)
                                                                         0.00B
model.layers.14.self_attn.k_proj.weight.grad
                                                       (4096, 4096)
                                                                         0.00B
model.layers.14.self_attn.q_proj.weight.grad
                                                       (4096, 4096)
                                                                         0.00B
model.layers.13.post_attention_layernorm.weight.grad
                                                                     (4096,)
                                                                                 0.00B
model.layers.13.input_layernorm.weight.grad
                                                           (4096,)
                                                                        0.00B
model.layers.13.mlp.down proj.weight.grad
                                                   (4096, 11008)
                                                                      0.00B
model.layers.13.mlp.up proj.weight.grad
                                                  (11008, 4096)
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model.layers.13.mlp.gate proj.weight.grad
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model.layers.13.self_attn.o_proj.weight.grad
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model.layers.13.self attn.v proj.weight.grad
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                                                       (4096, 4096)
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model.layers.13.self attn.k proj.weight.grad
model.layers.13.self_attn.q_proj.weight.grad
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model.layers.12.post_attention_layernorm.weight.grad
                                                                     (4096,)
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model.layers.12.input layernorm.weight.grad
                                                           (4096.)
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                                                   (4096, 11008)
model.layers.12.mlp.down_proj.weight.grad
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model.layers.12.mlp.up proj.weight.grad
                                                  (11008, 4096)
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model.layers.12.mlp.gate_proj.weight.grad
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model.layers.12.self attn.o proj.weight.grad
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model.layers.12.self_attn.v_proj.weight.grad
model.layers.12.self attn.k proj.weight.grad
                                                       (4096, 4096)
                                                                         0.00B
\verb|model.layers.12.self_attn.q_proj.weight.grad|\\
                                                       (4096, 4096)
                                                                         0.00B
                                                                                 0.00B
model.layers.11.post attention layernorm.weight.grad
                                                                     (4096.)
                                                           (4096,)
{\tt model.layers.11.input\_layernorm.weight.grad}
                                                                        0.00B
                                                   (4096, 11008)
                                                                      0.00B
model.layers.11.mlp.down_proj.weight.grad
model.layers.11.mlp.up proj.weight.grad
                                                  (11008.4096)
                                                                     0.00B
model.layers.11.mlp.gate_proj.weight.grad
                                                   (11008, 4096)
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                                                       (4096, 4096)
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model.layers.11.self_attn.o_proj.weight.grad
                                                       (4096, 4096)
model.layers.11.self attn.v proj.weight.grad
                                                                         0.00B
model.layers.11.self_attn.k_proj.weight.grad
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                                                       (4096, 4096)
model.layers.11.self attn.q proj.weight.grad
                                                       (4096, 4096)
                                                                         0.00B
                                                                     (4096,)
                                                                                 0.00B
\verb|model.layers.10.post_attention_layernorm.weight.grad|\\
Tensor945
                                                (1, 32, 2, 128)
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Tensor946
                                                (1, 32, 2, 128)
                                                                    32.00K
Tensor947
                                                (1, 32, 2, 128)
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Tensor948
                                                (1, 32, 2, 128)
                                                                    32.00K
Tensor949
                                                (1, 32, 2,
                                                          128)
                                                                     0.00B
Tensor950
                                                (1, 32, 2, 128)
                                                                    32.00K
Tensor951
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                                                (1, 32, 2, 128)
Tensor952
                                                                    32.00K
Tensor953
                                                (1, 32, 2, 128)
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Tensor954
                                                (1, 32, 2, 128)
                                                                    32.00K
Tensor955
                                                (1, 32, 2, 128)
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Tensor956
                                                (1, 32, 2, 128)
                                                                    32.00K
Tensor957
                                                (1, 32, 2,
                                                           128)
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                                                (1, 32, 2, 128)
                                                                    32.00K
Tensor958
Tensor959
                                                (1, 32, 2, 128)
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Tensor960
                                                (1, 32, 2, 128)
                                                                    32.00K
Tensor961
                                                (1, 32, 2, 128)
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Tensor962
                                                (1, 32, 2, 128)
                                                                    32.00K
Tensor963
                                                (1, 32, 2, 128)
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Tensor964
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Tensor965
                                                (1, 32, 2,
                                                           128)
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Tensor966
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Tensor967
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Tensor968
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Tensor969
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Tensor970
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Tensor971
Tensor972
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                                                           128)
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Tensor973
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                                                           128)
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Tensor974
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Tensor975
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Tensor976
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Tensor977
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Tensor978
                                                (1, 32, 2, 128)
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                                                                     0.00B
                                                (1, 32, 2, 128)
Tensor979
Tensor980
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                                                   32, 2,
                                                           128)
                                                                    32.00K
                                                (1, 32, 2, 128)
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Tensor981
Tensor982
                                                (1, 32, 2, 128)
                                                                    32.00K
Tensor983
                                                (1, 32, 2, 128)
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Tensor984
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Tensor985
                                                (1, 32, 2, 128)
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Tensor986
                                                (1, 32, 2, 128)
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Tensor987
                                                (1, 32, 2, 128)
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Tensor988
                                                (1,
                                                   32, 2,
                                                           128)
                                                                    32.00K
Tensor989
                                                (1, 32, 2, 128)
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Tensor990
                                                     (1, 32, 2, 128)
                                                                        32.00K
                                                                         0.00B
       Tensor991
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(1, 32, 2, 128)
                                                                        32.00K
       Tensor992
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       Tensor993
       Tensor994
                                                    (1, 32, 2, 128)
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       Tensor995
                                                    (1, 32, 2, 128)
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(1, 32, 2, 128)
       Tensor996
                                                                       32.00K
       Tensor997
                                                                        0.00B
       Tensor998
                                                    (1, 32, 2, 128)
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       Tensor999
                                                    (1, 32, 2, 128)
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                                                     (1, 32, 2, 128)
                                                                        32.00K
       Tensor1000
       Tensor1001
                                                    (1, 32, 2, 128)
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       Tensor1002
                                                    (1, 32, 2, 128)
                                                                        32.00K
       Tensor1003
                                                    (1, 32, 2, 128)
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                                                    (1, 32, 2, 128)
(1, 32, 2, 128)
       Tensor1004
                                                                        32.00K
       Tensor1005
                                                                        0.00B
       Tensor1006
                                                                       32.00K
                                                     (1, 32, 2, 128)
       Tensor1007
                                                               (1,) 512.00B
       Total Tensors: 33692930922 Used Memory: 100.41G
       C:\Users\xxc13\anaconda3\Lib\site-packages\pytorch_memlab\mem_reporter.py:65: FutureWarning: `torch.distributed.
       reduce_op` is deprecated, please use `torch.distributed.ReduceOp` instead
        tensors = [obj for obj in objects if isinstance(obj, torch.Tensor)]
       C:\Users\xxc13\anaconda3\Lib\site-packages\pytorch_memlab\mem_reporter.py:95: UserWarning: TypedStorage is depre
       cated. It will be removed in the future and UntypedStorage will be the only storage class. This should only matt
       er to you if you are using storages directly. To access UntypedStorage directly, use tensor.untyped_storage() i
       nstead of tensor.storage()
       fact numel = tensor.storage().size()
In [3]: # 清理内存
        del outputs, loss
        gc.collect()
Out[3]: 46
In [ ]:
```