Double-click (or enter) to edit

```
!pip uninstall accelerate peft bitsandbytes transformers trl gcsfs fsspec -y

!pip install accelerate peft==0.13.2 bitsandbytes transformers trl==0.12.0 \
fsspec==2024.12.0 gcsfs==2024.12.0
```

Show hidden output

```
!pip install huggingface_hub
```

Show hidden output

```
import torch
from trl import SFTTrainer
from peft import LoraConfig
from datasets import load_dataset
from transformers import (AutoModelForCausalLM, AutoTokenizer, BitsAndBytesConfig, TrainingArguments, pipeline)


llama_model = AutoModelForCausalLM.from_pretrained(pretrained_model_name_or_path = "aboonaji/llama2finetune-v2",
                                                   quantization_config = BitsAndBytesConfig(load_in_4bit = True, bnb_4bit_compute_dtype = ge
llama_model.config.use_cache = False
llama_model.config.pretraining_tp = 1
```

Show hidden output

```
llama_model.gradient_checkpointing_enable()
llama_model.enable_input_require_grads()


llama_tokenizer = AutoTokenizer.from_pretrained(pretrained_model_name_or_path = "aboonaji/llama2finetune-v2", trust_remote_code = True)
llama_tokenizer.pad_token = llama_tokenizer.eos_token
llama_tokenizer.padding_side = "right"


training_arguments = TrainingArguments(output_dir = "./results", per_device_train_batch_size = 2, max_steps = 50)


llama_sft_trainer = SFTTrainer(
    model=llama_model,
    args=training_arguments,
    train_dataset=load_dataset(path="aboonaji/wiki_medical_terms_llam2_format", split="train"),
    peft_config=LoraConfig(task_type="CAUSAL_LM", r=64, lora_alpha=16, lora_dropout=0.1),
    processing_class=llama_tokenizer,
    formatting_func=lambda x: x["text"]
)
```

Show hidden output

```
llama_sft_trainer.train()
```

Show hidden output

```
#Chatting with bot
user_prompt = "Please tell me about Bursitis"
text_generation_pipeline = pipeline(task = "text-generation", model = llama_model, tokenizer = llama_tokenizer, max_length = 500)
model_answer = text_generation_pipeline(f"<s>[INST] {user_prompt} [/INST]")
print(model_answer[0]['generated_text'])
```

```
Device set to use cuda:0
/usr/local/lib/python3.11/dist-packages/torch/utils/checkpoint.py:87: UserWarning: None of the inputs have requires_grad=True. Gradients
  warnings.warn(
<s>[INST] Please tell me about Bursitis [/INST]  Bursitis is a condition where the bursae, small fluid-filled sacs that cushion and redu

Causes:

* Overuse or repetitive motion of a joint can cause bursitis.
* Trauma or injury to a joint can also cause bursitis.
* Age-related wear and tear on the joints can lead to bursitis.
* Medical conditions such as rheumatoid arthritis, gout, and pseudogout can cause bursitis.
* Infection or infection can also cause bursitis.
```

Symptoms:

* Pain and tenderness in the affected joint.
* Swelling and warmth in the affected area.
* Limited mobility or stiffness in the affected joint.
* Redness or discoloration of the skin around the affected joint.
* Fever or chills.

Types of bursitis:

* Achilles tendon bursitis: Inflammation of the bursa located at the back of the ankle, near the Achilles tendon.
* Hip bursitis: Inflammation of the bursa located in the hip joint.
* Knee bursitis: Inflammation of the bursa located in the knee joint.
* Patellar bursitis: Inflammation of the bursa located in the front of the knee, near the kneecap.
* Retro-patellar bursitis: Inflammation of the bursa located behind the knee.
* Shoulder bursitis: Inflammation of the bursa located in the shoulder joint.
* Elbow bursitis: Inflammation of the bursa located in the elbow joint.

Treatment:

* Rest and avoidance of activities that aggravate the condition.
* Ice and heat applications to reduce pain and inflammation.