```
# Install required libraries
!pip install transformers # Installs the transformers library for NLP
models
!pip install imageio  # Installs imageio to handle image files
(e.g., GIFs)
!pip install gtts
                         # Installs Google Text-to-Speech API for
text-to-speech
!pip install bert-score # Installs the BERTScore metric library for
evaluation
!pip install nltk
                          # Installs the NLTK library for natural
language processing tasks
!pip install rouge-score # Installs the Rouge score package for
evaluation metrics
import os
import json
import random
import requests
import imageio
from PIL import Image
from io import BytesIO
import torch
from transformers import (
   BlipProcessor,
   BlipForConditionalGeneration,
   T5Tokenizer,
   T5ForConditionalGeneration.
   AdamW
from torch.utils.data import Dataset, DataLoader, random split
from tgdm import tgdm
import nltk
from nltk.translate.bleu score import sentence bleu, corpus bleu
# from nltk.translate.meteor score import meteor score
from rouge score import rouge scorer
from bert score import score as bert score fn
import numpy as np
# Download NLTK data
nltk.download('wordnet')
Requirement already satisfied: transformers in
/usr/local/lib/python3.10/dist-packages (4.44.2)
Requirement already satisfied: filelock in
/usr/local/lib/python3.10/dist-packages (from transformers) (3.16.1)
Requirement already satisfied: huggingface-hub<1.0,>=0.23.2 in
/usr/local/lib/python3.10/dist-packages (from transformers) (0.24.7)
Requirement already satisfied: numpy>=1.17 in
/usr/local/lib/python3.10/dist-packages (from transformers) (1.26.4)
Requirement already satisfied: packaging>=20.0 in
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/usr/local/lib/python3.10/dist-packages (from transformers) (24.1)
Requirement already satisfied: pyyaml>=5.1 in
/usr/local/lib/python3.10/dist-packages (from transformers) (6.0.2)
Requirement already satisfied: regex!=2019.12.17 in
/usr/local/lib/python3.10/dist-packages (from transformers)
(2024.9.11)
Requirement already satisfied: requests in
/usr/local/lib/python3.10/dist-packages (from transformers) (2.32.3)
Requirement already satisfied: safetensors>=0.4.1 in
/usr/local/lib/python3.10/dist-packages (from transformers) (0.4.5)
Requirement already satisfied: tokenizers<0.20,>=0.19 in
/usr/local/lib/python3.10/dist-packages (from transformers) (0.19.1)
Requirement already satisfied: tqdm>=4.27 in
/usr/local/lib/python3.10/dist-packages (from transformers) (4.66.6)
Requirement already satisfied: fsspec>=2023.5.0 in
/usr/local/lib/python3.10/dist-packages (from huggingface-
hub<1.0,>=0.23.2->transformers) (2024.10.0)
Requirement already satisfied: typing-extensions>=3.7.4.3 in
/usr/local/lib/python3.10/dist-packages (from huggingface-
hub<1.0,>=0.23.2->transformers) (4.12.2)
Requirement already satisfied: charset-normalizer<4,>=2 in
/usr/local/lib/python3.10/dist-packages (from requests->transformers)
(3.4.0)
Requirement already satisfied: idna<4,>=2.5 in
/usr/local/lib/python3.10/dist-packages (from requests->transformers)
(3.10)
Requirement already satisfied: urllib3<3,>=1.21.1 in
/usr/local/lib/python3.10/dist-packages (from requests->transformers)
(2.2.3)
Requirement already satisfied: certifi>=2017.4.17 in
/usr/local/lib/python3.10/dist-packages (from requests->transformers)
(2024.8.30)
Requirement already satisfied: imageio in
/usr/local/lib/python3.10/dist-packages (2.36.0)
Requirement already satisfied: numpy in
/usr/local/lib/python3.10/dist-packages (from imageio) (1.26.4)
Requirement already satisfied: pillow>=8.3.2 in
/usr/local/lib/python3.10/dist-packages (from imageio) (10.4.0)
Collecting gtts
  Downloading gTTS-2.5.3-py3-none-any.whl.metadata (4.1 kB)
Requirement already satisfied: requests<3,>=2.27 in
/usr/local/lib/python3.10/dist-packages (from gtts) (2.32.3)
Requirement already satisfied: click<8.2,>=7.1 in
/usr/local/lib/python3.10/dist-packages (from gtts) (8.1.7)
Requirement already satisfied: charset-normalizer<4,>=2 in
/usr/local/lib/python3.10/dist-packages (from requests<3,>=2.27->gtts)
(3.4.0)
Requirement already satisfied: idna<4,>=2.5 in
/usr/local/lib/python3.10/dist-packages (from requests<3,>=2.27->gtts)
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(3.10)
Requirement already satisfied: urllib3<3,>=1.21.1 in
/usr/local/lib/python3.10/dist-packages (from requests<3,>=2.27->gtts)
Requirement already satisfied: certifi>=2017.4.17 in
/usr/local/lib/python3.10/dist-packages (from requests<3,>=2.27->gtts)
(2024.8.30)
Downloading gTTS-2.5.3-py3-none-any.whl (29 kB)
Installing collected packages: gtts
Successfully installed gtts-2.5.3
Collecting bert-score
  Downloading bert score-0.3.13-py3-none-any.whl.metadata (15 kB)
Requirement already satisfied: torch>=1.0.0 in
/usr/local/lib/python3.10/dist-packages (from bert-score)
(2.5.0+cu121)
Requirement already satisfied: pandas>=1.0.1 in
/usr/local/lib/python3.10/dist-packages (from bert-score) (2.2.2)
Requirement already satisfied: transformers>=3.0.0 in
/usr/local/lib/python3.10/dist-packages (from bert-score) (4.44.2)
Requirement already satisfied: numpy in
/usr/local/lib/python3.10/dist-packages (from bert-score) (1.26.4)
Requirement already satisfied: requests in
/usr/local/lib/python3.10/dist-packages (from bert-score) (2.32.3)
Requirement already satisfied: tqdm>=4.31.1 in
/usr/local/lib/python3.10/dist-packages (from bert-score) (4.66.6)
Requirement already satisfied: matplotlib in
/usr/local/lib/python3.10/dist-packages (from bert-score) (3.8.0)
Requirement already satisfied: packaging>=20.9 in
/usr/local/lib/python3.10/dist-packages (from bert-score) (24.1)
Requirement already satisfied: python-dateutil>=2.8.2 in
/usr/local/lib/python3.10/dist-packages (from pandas>=1.0.1->bert-
score) (2.8.2)
Requirement already satisfied: pytz>=2020.1 in
/usr/local/lib/python3.10/dist-packages (from pandas>=1.0.1->bert-
score) (2024.2)
Requirement already satisfied: tzdata>=2022.7 in
/usr/local/lib/python3.10/dist-packages (from pandas>=1.0.1->bert-
score) (2024.2)
Requirement already satisfied: filelock in
/usr/local/lib/python3.10/dist-packages (from torch>=1.0.0->bert-
score) (3.16.1)
Requirement already satisfied: typing-extensions>=4.8.0 in
/usr/local/lib/python3.10/dist-packages (from torch>=1.0.0->bert-
score) (4.12.2)
Requirement already satisfied: networkx in
/usr/local/lib/python3.10/dist-packages (from torch>=1.0.0->bert-
score) (3.4.2)
Requirement already satisfied: jinja2 in
/usr/local/lib/python3.10/dist-packages (from torch>=1.0.0->bert-
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score) (3.1.4)
Requirement already satisfied: fsspec in
/usr/local/lib/python3.10/dist-packages (from torch>=1.0.0->bert-
score) (2024.10.0)
Requirement already satisfied: sympy==1.13.1 in
/usr/local/lib/python3.10/dist-packages (from torch>=1.0.0->bert-
score) (1.13.1)
Requirement already satisfied: mpmath<1.4,>=1.1.0 in
/usr/local/lib/python3.10/dist-packages (from sympy==1.13.1-
>torch>=1.0.0->bert-score) (1.3.0)
Requirement already satisfied: huggingface-hub<1.0,>=0.23.2 in
/usr/local/lib/python3.10/dist-packages (from transformers>=3.0.0-
>bert-score) (0.24.7)
Requirement already satisfied: pyyaml>=5.1 in
/usr/local/lib/python3.10/dist-packages (from transformers>=3.0.0-
>bert-score) (6.0.2)
Requirement already satisfied: regex!=2019.12.17 in
/usr/local/lib/python3.10/dist-packages (from transformers>=3.0.0-
>bert-score) (2024.9.11)
Requirement already satisfied: safetensors>=0.4.1 in
/usr/local/lib/python3.10/dist-packages (from transformers>=3.0.0-
>bert-score) (0.4.5)
Requirement already satisfied: tokenizers<0.20,>=0.19 in
/usr/local/lib/python3.10/dist-packages (from transformers>=3.0.0-
>bert-score) (0.19.1)
Requirement already satisfied: contourpy>=1.0.1 in
/usr/local/lib/python3.10/dist-packages (from matplotlib->bert-score)
(1.3.0)
Requirement already satisfied: cycler>=0.10 in
/usr/local/lib/python3.10/dist-packages (from matplotlib->bert-score)
(0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in
/usr/local/lib/python3.10/dist-packages (from matplotlib->bert-score)
(4.54.1)
Requirement already satisfied: kiwisolver>=1.0.1 in
/usr/local/lib/python3.10/dist-packages (from matplotlib->bert-score)
Requirement already satisfied: pillow>=6.2.0 in
/usr/local/lib/python3.10/dist-packages (from matplotlib->bert-score)
Requirement already satisfied: pyparsing>=2.3.1 in
/usr/local/lib/python3.10/dist-packages (from matplotlib->bert-score)
(3.2.0)
Requirement already satisfied: charset-normalizer<4,>=2 in
/usr/local/lib/python3.10/dist-packages (from requests->bert-score)
(3.4.0)
Requirement already satisfied: idna<4,>=2.5 in
/usr/local/lib/python3.10/dist-packages (from requests->bert-score)
(3.10)
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Requirement already satisfied: urllib3<3,>=1.21.1 in
/usr/local/lib/python3.10/dist-packages (from requests->bert-score)
(2.2.3)
Requirement already satisfied: certifi>=2017.4.17 in
/usr/local/lib/python3.10/dist-packages (from requests->bert-score)
(2024.8.30)
Requirement already satisfied: six>=1.5 in
/usr/local/lib/python3.10/dist-packages (from python-dateutil>=2.8.2-
>pandas>=1.0.1->bert-score) (1.16.0)
Requirement already satisfied: MarkupSafe>=2.0 in
/usr/local/lib/python3.10/dist-packages (from jinja2->torch>=1.0.0-
>bert-score) (3.0.2)
Downloading bert score-0.3.13-py3-none-any.whl (61 kB)
                                       - 61.1/61.1 kB 5.0 MB/s eta
0:00:00
ent already satisfied: nltk in /usr/local/lib/python3.10/dist-packages
(3.8.1)
Requirement already satisfied: click in
/usr/local/lib/python3.10/dist-packages (from nltk) (8.1.7)
Requirement already satisfied: joblib in
/usr/local/lib/python3.10/dist-packages (from nltk) (1.4.2)
Requirement already satisfied: regex>=2021.8.3 in
/usr/local/lib/python3.10/dist-packages (from nltk) (2024.9.11)
Requirement already satisfied: tqdm in /usr/local/lib/python3.10/dist-
packages (from nltk) (4.66.6)
Collecting rouge-score
  Downloading rouge score-0.1.2.tar.gz (17 kB)
  Preparing metadata (setup.py) ... ent already satisfied: absl-py
in /usr/local/lib/python3.10/dist-packages (from rouge-score) (1.4.0)
Requirement already satisfied: nltk in /usr/local/lib/python3.10/dist-
packages (from rouge-score) (3.8.1)
Requirement already satisfied: numpy in
/usr/local/lib/python3.10/dist-packages (from rouge-score) (1.26.4)
Requirement already satisfied: six>=1.14.0 in
/usr/local/lib/python3.10/dist-packages (from rouge-score) (1.16.0)
Requirement already satisfied: click in
/usr/local/lib/python3.10/dist-packages (from nltk->rouge-score)
(8.1.7)
Requirement already satisfied: joblib in
/usr/local/lib/python3.10/dist-packages (from nltk->rouge-score)
(1.4.2)
Requirement already satisfied: regex>=2021.8.3 in
/usr/local/lib/python3.10/dist-packages (from nltk->rouge-score)
(2024.9.11)
Requirement already satisfied: tqdm in /usr/local/lib/python3.10/dist-
packages (from nltk->rouge-score) (4.66.6)
Building wheels for collected packages: rouge-score
  Building wheel for rouge-score (setup.py) ... e=rouge score-0.1.2-
py3-none-any.whl size=24935
```

```
sha256=7a78130f332a1bba9ba244bc114b897e2d69c8d4e0b85ba4d8182fba589cacc
  Stored in directory:
/root/.cache/pip/wheels/5f/dd/89/461065a73be61a532ff8599a28e9beef17985
c9e9c31e541b4
Successfully built rouge-score
Installing collected packages: rouge-score
Successfully installed rouge-score-0.1.2
[nltk data] Downloading package wordnet to /root/nltk data...
True
import os
import json
import random
# Define paths
metadata_file = 'datafile.json' # Path to your metadata file that
contains GIF information
gifs dir = 'gifs temp'
                                # Directory to temporarily store GIFs
# Create temporary GIFs directory if it doesn't exist
os.makedirs(gifs dir, exist ok=True)
# Load metadata from the metadata file
with open(metadata file, 'r') as f:
    metadata = json.load(f)
# Check if the dataset contains at least 300 GIFs, if not raise an
error
if len(metadata) < 300:</pre>
    raise ValueError("The metadata file contains fewer than 100
GIFs.")
# Randomly select 300 GIFs from the metadata for processing
selected gifs = random.sample(metadata, 300)
# Output the number of selected GIFs
print(f"Selected {len(selected gifs)} random GIFs for processing.")
Selected 300 random GIFs for processing.
import time
# Enhanced download function with retries
def download gif(url, save path, max retries=3, backoff factor=2):
    for attempt in range(1, max retries + 1):
        try:
            headers = {
                "User-Agent": "Mozilla/5.0 (Windows NT 10.0; Win64;
```

```
x64)"
            }
            response = requests.get(url, headers=headers, timeout=10)
            response.raise for status()
            with open(save path, 'wb') as f:
                f.write(response.content)
            print(f"Downloaded: {save path}")
            return True
        except requests.exceptions.HTTPError as http err:
            print(f"HTTP error: {http err} - Attempt {attempt}")
            if response.status code == 404:
        except requests.exceptions.RequestException as req err:
            print(f"Request error: {req err} - Attempt {attempt}")
        except Exception as e:
            print(f"Unexpected error: {e} - Attempt {attempt}")
        # Exponential backoff
        time.sleep(backoff_factor ** attempt)
    print(f"Failed to download {url}")
    return False
# Function to extract and preprocess frames from GIF
def extract frames(gif path, num frames=10, frame size=(256, 256)):
        gif = imageio.mimread(gif path)
        total frames = len(gif)
        if total frames == 0:
            raise ValueError("No frames found in GIF.")
        interval = max(total_frames // num_frames, 1)
        selected frames = [gif[i] for i in range(0, total frames,
interval)][:num frames]
        processed frames = []
        for frame in selected frames:
            img = Image.fromarray(frame)
            if img.mode != 'RGB':
                img = img.convert('RGB')
            img resized = img.resize(frame size)
            processed frames.append(np.array(img resized))
        # Pad with the last frame or zeros
        while len(processed frames) < num frames:</pre>
            processed frames.append(processed frames[-1] if
processed frames else np.zeros((frame size[0], frame size[1], 3),
dtype=np.uint8))
        return processed frames
```

```
except Exception as e:
        print(f"Failed to extract frames from {gif path}: {e}")
        return []
# Function to delete GIF after processing
def delete gif(gif path):
    try:
        os.remove(gif path)
        print(f"Deleted: {gif path}")
    except Exception as e:
        print(f"Failed to delete {gif path}: {e}")
import torch
import numpy as np
from tqdm import tqdm
import os
# Initialize lists to store data
target frames = []
target texts = []
# Process each GIF
for gif in tqdm(selected gifs, desc="Processing GIFs"):
    qif id = qif.qet('id')
    url = gif.get('url')
    reference description = gif.get('description')
    # Validate GIF entry
    if not gif id or not url or not reference description:
        print(f"Invalid GIF entry: {gif}")
        continue
    # Define local path to save the GIF temporarily
    gif filename = f"{gif id}.gif"
    gif_path = os.path.join(gifs_dir, gif_filename)
    # Download the GIF
    success = download gif(url, gif path)
    if not success:
        print(f"Skipping GIF {gif id} due to download failure.")
        continue
    # Extract frames
    selected frames = extract frames(gif path, num frames=5)
    # Validate frame extraction
    if not selected frames:
        print(f"No frames extracted for {gif id}. Skipping.")
        delete gif(gif path)
        continue
```

```
# Append the extracted frames and corresponding text
   target frames.append(selected frames)
   target texts.append(reference description)
   # Delete the downloaded GIF
   delete gif(gif path)
Processing GIFs: 0% | 1/300 [00:00<02:46, 1.80it/s]
Downloaded: gifs temp/gif 42570.gif
Deleted: gifs temp/gif 42570.gif
Processing GIFs: 1%
                               | 2/300 [00:00<02:17, 2.17it/s]
Downloaded: gifs_temp/gif_85128.gif
Deleted: gifs_temp/gif_85128.gif
Processing GIFs: 1% | 3/300 [00:01<02:10, 2.28it/s]
Downloaded: gifs temp/gif 73526.gif
Deleted: gifs temp/gif 73526.gif
Processing GIFs: 1%||
                               | 4/300 [00:01<02:29, 1.98it/s]
Downloaded: gifs_temp/gif_21909.gif
Deleted: gifs temp/gif 21909.gif
Processing GIFs: 2%
                               | 5/300 [00:02<02:17, 2.14it/s]
Downloaded: gifs temp/gif 89093.gif
Deleted: gifs temp/gif 89093.gif
Processing GIFs: 2%| | 6/300 [00:02<02:25, 2.03it/s]
Downloaded: gifs temp/gif 62834.gif
Deleted: gifs temp/gif 62834.gif
Processing GIFs:
                  2%||
                      | 7/300 [00:03<02:29, 1.96it/s]
Downloaded: gifs_temp/gif_13214.gif
Deleted: gifs temp/gif 13214.gif
Processing GIFs: 3%| | 8/300 [00:03<02:21, 2.07it/s]
Downloaded: gifs temp/gif 25843.gif
Deleted: gifs temp/gif 25843.gif
Processing GIFs: 3%
                               | 9/300 [00:04<02:20, 2.07it/s]
Downloaded: gifs_temp/gif_56423.gif
Deleted: gifs temp/gif 56423.gif
Processing GIFs:
                  3%|
                               | 10/300 [00:04<02:19, 2.08it/s]
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Downloaded: gifs temp/gif_43482.gif
Deleted: gifs temp/gif 43482.gif
Processing GIFs: 4%
                       | 11/300 [00:05<02:31, 1.91it/s]
Downloaded: gifs_temp/gif_1705.gif
Deleted: gifs temp/gif 1705.gif
Processing GIFs:
                  4%|
                               | 12/300 [00:06<02:33, 1.88it/s]
Downloaded: gifs_temp/gif_25374.gif
Deleted: gifs temp/gif 25374.gif
Processing GIFs: 4%
                               | 13/300 [00:06<02:52, 1.66it/s]
Downloaded: gifs temp/gif 21478.gif
Deleted: gifs temp/gif 21478.gif
Processing GIFs: 5%
                        | 14/300 [00:07<02:33, 1.86it/s]
Downloaded: gifs_temp/gif_23594.gif
Deleted: gifs temp/gif 23594.gif
Processing GIFs:
                  5%|
                               | 15/300 [00:07<02:22, 2.00it/s]
Downloaded: gifs temp/gif 81143.gif
Deleted: gifs temp/gif 81143.gif
                        | 16/300 [00:08<02:17, 2.06it/s]
Processing GIFs:
                  5%||
Downloaded: gifs temp/gif 50967.gif
Deleted: gifs temp/gif 50967.gif
Processing GIFs: 6%
                               | 17/300 [00:08<02:09, 2.19it/s]
Downloaded: gifs temp/gif 45183.gif
Deleted: gifs temp/gif 45183.gif
Processing GIFs: 6%| | 18/300 [00:08<02:12, 2.12it/s]
Downloaded: gifs temp/gif 40001.gif
Deleted: gifs temp/gif 40001.gif
                               | 19/300 [00:09<02:19, 2.02it/s]
Processing GIFs: 6%
Downloaded: gifs temp/gif 81754.gif
Deleted: gifs temp/gif 81754.gif
Processing GIFs: 7%
                        | 20/300 [00:09<02:18, 2.01it/s]
Downloaded: gifs temp/gif 34504.gif
Deleted: gifs temp/gif 34504.gif
Processing GIFs:
                  7%|
                               | 21/300 [00:10<02:32, 1.82it/s]
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Downloaded: gifs_temp/gif_8461.gif
Deleted: gifs temp/gif 8461.gif
Processing GIFs: 7%|
                              | 22/300 [00:11<02:21, 1.96it/s]
Downloaded: gifs_temp/gif_88487.gif
Deleted: gifs temp/gif 88487.gif
Processing GIFs: 8%|
                       | 23/300 [00:11<02:38, 1.75it/s]
Downloaded: gifs_temp/gif_11639.gif
Deleted: gifs temp/gif 11639.gif
Processing GIFs: 8%|
                               | 24/300 [00:12<02:26, 1.89it/s]
Downloaded: gifs temp/gif 47521.gif
Deleted: gifs temp/gif 47521.qif
Processing GIFs: 8%|
                       | 25/300 [00:12<02:22, 1.93it/s]
Downloaded: gifs temp/gif 11553.gif
Deleted: gifs temp/gif 11553.gif
Processing GIFs: 9%|
                               | 26/300 [00:13<02:11, 2.08it/s]
Downloaded: gifs temp/gif 69785.gif
Deleted: gifs temp/gif 69785.gif
                       | 27/300 [00:13<02:13, 2.05it/s]
Processing GIFs: 9%
Downloaded: gifs temp/gif 12691.gif
Deleted: gifs temp/gif 12691.gif
Processing GIFs: 9%|
                               | 28/300 [00:14<02:07, 2.14it/s]
Downloaded: gifs temp/gif 58768.gif
Deleted: gifs temp/gif 58768.gif
Processing GIFs: 10% | 29/300 [00:14<01:57, 2.30it/s]
Downloaded: gifs temp/gif 10023.gif
Deleted: gifs temp/gif 10023.gif
Processing GIFs: 10% | 30/300 [00:15<02:12, 2.04it/s]
Downloaded: gifs_temp/gif_20583.gif
Deleted: gifs temp/gif 20583.gif
Processing GIFs: 10%
                       | 31/300 [00:15<02:21, 1.90it/s]
Downloaded: gifs temp/gif 6323.gif
Deleted: gifs temp/gif 6323.gif
Processing GIFs: 11%
                               | 32/300 [00:16<02:13, 2.00it/s]
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Downloaded: gifs temp/gif 67244.gif
Deleted: gifs temp/gif 67244.gif
Processing GIFs: 11% | 33/300 [00:16<02:28, 1.80it/s]
Downloaded: gifs_temp/gif_87189.gif
Deleted: gifs temp/gif 87189.gif
Processing GIFs: 11% | 34/300 [00:17<02:18, 1.92it/s]
Downloaded: gifs_temp/gif_54160.gif
Deleted: gifs temp/gif 54160.gif
Processing GIFs: 12% | 35/300 [00:17<02:20, 1.88it/s]
Downloaded: gifs temp/gif 8785.gif
Deleted: gifs temp/gif 8785.gif
Processing GIFs: 12%
                       | 36/300 [00:18<02:22, 1.86it/s]
Downloaded: gifs temp/gif 55785.gif
Deleted: gifs temp/gif 55785.gif
Processing GIFs: 12%
                              | 37/300 [00:18<02:32, 1.73it/s]
Downloaded: gifs temp/gif 17294.gif
Deleted: gifs temp/gif 17294.gif
Processing GIFs: 13% | 38/300 [00:19<02:19, 1.87it/s]
Downloaded: gifs temp/gif 3513.gif
Deleted: gifs temp/gif 3513.gif
Processing GIFs: 13% | 39/300 [00:19<02:12, 1.96it/s]
Downloaded: gifs temp/gif 6588.gif
Deleted: gifs temp/gif 6588.gif
Processing GIFs: 13% | 40/300 [00:20<02:16, 1.91it/s]
Downloaded: gifs temp/gif 45195.gif
Deleted: gifs temp/gif 45195.gif
Processing GIFs: 14%
                              | 41/300 [00:20<02:06, 2.05it/s]
Downloaded: gifs temp/gif 10284.gif
Deleted: gifs temp/gif 10284.gif
Processing GIFs: 14%
                       | 42/300 [00:21<02:03, 2.08it/s]
Downloaded: gifs temp/gif 67742.gif
Deleted: gifs temp/gif 67742.gif
Processing GIFs: 14%
                              | 43/300 [00:21<02:03, 2.09it/s]
```

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Downloaded: gifs_temp/gif_13370.gif
Deleted: gifs temp/gif 13370.gif
Processing GIFs: 15%
                              | 44/300 [00:22<02:04, 2.06it/s]
Downloaded: gifs_temp/gif_22116.gif
Deleted: gifs temp/gif 22116.gif
Processing GIFs: 15% | 45/300 [00:22<02:06, 2.01it/s]
Downloaded: gifs_temp/gif_55382.gif
Deleted: gifs temp/gif 55382.gif
Processing GIFs: 15%|
                              | 46/300 [00:23<02:03, 2.06it/s]
Downloaded: gifs temp/gif 26330.gif
Deleted: gifs temp/gif 26330.gif
Processing GIFs: 16% | 47/300 [00:23<02:03, 2.05it/s]
Downloaded: gifs temp/gif 78006.gif
Deleted: gifs temp/gif 78006.gif
Processing GIFs: 16%
                              | 48/300 [00:24<02:09, 1.95it/s]
Downloaded: gifs temp/gif 9625.gif
Deleted: gifs temp/gif 9625.gif
Processing GIFs: 16% 49/300 [00:24<02:11, 1.91it/s]
Downloaded: gifs temp/gif 45333.gif
Deleted: gifs temp/gif 45333.gif
Processing GIFs: 17% | 50/300 [00:25<02:14, 1.86it/s]
Downloaded: gifs temp/gif 58633.gif
Deleted: gifs temp/gif 58633.gif
Processing GIFs: 17% | 51/300 [00:25<02:04, 2.00it/s]
Downloaded: gifs temp/gif 66652.gif
Deleted: gifs temp/gif 66652.gif
Processing GIFs: 17% | 52/300 [00:26<02:06, 1.96it/s]
Downloaded: gifs temp/gif 58180.gif
Deleted: gifs temp/gif 58180.gif
Processing GIFs: 18%
                        | 53/300 [00:26<02:09, 1.91it/s]
Downloaded: gifs temp/gif 61494.gif
Deleted: gifs temp/gif 61494.gif
 Processing GIFs: 18%
                              | 54/300 [00:27<02:10, 1.88it/s]
```

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Downloaded: gifs temp/gif 12380.gif
Deleted: gifs temp/gif 12380.gif
Processing GIFs: 18% | 55/300 [00:27<02:08, 1.91it/s]
Downloaded: gifs_temp/gif_53481.gif
Deleted: gifs temp/gif 53481.gif
Processing GIFs: 19% | 56/300 [00:28<02:05, 1.94it/s]
Downloaded: gifs_temp/gif_82870.gif
Deleted: gifs temp/gif 82870.gif
Processing GIFs: 19% | 57/300 [00:28<01:54, 2.12it/s]
Downloaded: gifs temp/gif 4968.gif
Deleted: gifs temp/gif 4968.gif
Processing GIFs: 19% | | 58/300 [00:29<01:59, 2.03it/s]
Downloaded: gifs temp/gif 61164.gif
Deleted: gifs temp/gif 61164.gif
Processing GIFs: 20%
                              | 59/300 [00:30<02:14, 1.79it/s]
Downloaded: gifs temp/gif 67526.gif
Deleted: gifs temp/gif 67526.gif
Processing GIFs: 20% | 60/300 [00:30<02:12, 1.81it/s]
Downloaded: gifs temp/gif 87518.gif
Deleted: gifs temp/gif 87518.gif
Processing GIFs: 20%
                              | 61/300 [00:31<02:05, 1.91it/s]
Downloaded: gifs temp/gif 85560.gif
Deleted: gifs temp/gif 85560.gif
Processing GIFs: 21% | 62/300 [00:31<01:58, 2.01it/s]
Downloaded: gifs temp/gif 14383.gif
Deleted: gifs temp/gif 14383.gif
Processing GIFs: 21%
                              | 63/300 [00:32<01:59, 1.99it/s]
Downloaded: gifs temp/gif 50124.gif
Deleted: gifs temp/gif 50124.gif
Processing GIFs: 21% | 64/300 [00:32<02:08, 1.84it/s]
Downloaded: gifs temp/gif 16250.gif
Deleted: gifs temp/gif 16250.gif
Processing GIFs: 22%
                              | 65/300 [00:33<01:53, 2.07it/s]
```

```
Downloaded: gifs temp/gif 56908.gif
Deleted: gifs temp/gif 56908.gif
Processing GIFs: 22% | 66/300 [00:33<01:55, 2.03it/s]
Downloaded: gifs_temp/gif_65123.gif
Deleted: gifs temp/gif 65123.gif
Processing GIFs: 22%| | 67/300 [00:34<01:53, 2.05it/s]
Downloaded: gifs_temp/gif_55125.gif
Deleted: gifs temp/gif 55125.gif
Processing GIFs: 23%
                              | 68/300 [00:34<01:51, 2.08it/s]
Downloaded: gifs temp/gif 70506.gif
Deleted: gifs temp/gif 70506.gif
Processing GIFs: 23% | 69/300 [00:34<01:49, 2.11it/s]
Downloaded: gifs temp/gif 69487.gif
Deleted: gifs temp/gif 69487.gif
Processing GIFs: 23%
                              | 70/300 [00:35<01:45, 2.19it/s]
Downloaded: gifs temp/gif 69003.gif
Deleted: gifs temp/gif 69003.gif
Processing GIFs: 24% | 71/300 [00:35<01:44, 2.18it/s]
Downloaded: gifs temp/gif 29320.gif
Deleted: gifs temp/gif 29320.gif
Processing GIFs: 24% | 72/300 [00:36<01:38, 2.31it/s]
Downloaded: gifs temp/gif 42135.gif
Deleted: gifs temp/gif 42135.gif
Processing GIFs: 24%| | 73/300 [00:36<01:40, 2.26it/s]
Downloaded: gifs temp/gif 83249.gif
Deleted: gifs temp/gif 83249.gif
Processing GIFs: 25% | 74/300 [00:37<01:40, 2.24it/s]
Downloaded: gifs temp/gif 33879.gif
Deleted: gifs temp/gif 33879.gif
Processing GIFs: 25% | | 75/300 [00:37<01:49, 2.06it/s]
Downloaded: gifs temp/gif 44260.gif
Deleted: gifs temp/gif 44260.gif
Processing GIFs: 25%
                              | 76/300 [00:38<01:44, 2.14it/s]
```

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Downloaded: gifs temp/gif_28707.gif
Deleted: gifs temp/gif 28707.gif
Processing GIFs: 26% | 77/300 [00:38<01:45, 2.12it/s]
Downloaded: gifs_temp/gif_36763.gif
Deleted: gifs temp/gif 36763.gif
Processing GIFs: 26% | 78/300 [00:39<01:50, 2.01it/s]
Downloaded: gifs_temp/gif_89169.gif
Deleted: gifs temp/gif 89169.gif
Processing GIFs: 26%
                              | 79/300 [00:39<01:44, 2.12it/s]
Downloaded: gifs temp/gif 22253.gif
Deleted: gifs temp/gif 22253.gif
Processing GIFs: 27% | 80/300 [00:40<01:43, 2.13it/s]
Downloaded: gifs temp/gif 73314.gif
Deleted: gifs temp/gif 73314.gif
Processing GIFs: 27%
                              | 81/300 [00:40<01:42, 2.14it/s]
Downloaded: gifs temp/gif 42572.gif
Deleted: gifs temp/gif 42572.gif
Processing GIFs: 27% | 82/300 [00:40<01:40, 2.17it/s]
Downloaded: gifs temp/gif 41789.gif
Deleted: gifs temp/gif 41789.gif
Processing GIFs: 28% | 83/300 [00:41<01:39, 2.19it/s]
Downloaded: gifs temp/gif 45359.gif
Deleted: gifs temp/gif 45359.gif
Processing GIFs: 28% | 84/300 [00:41<01:44, 2.06it/s]
Downloaded: gifs temp/gif 60721.gif
Deleted: gifs temp/gif 60721.gif
Processing GIFs: 28% | 85/300 [00:42<01:41, 2.12it/s]
Downloaded: gifs temp/gif 55879.gif
Deleted: gifs temp/gif 55879.gif
Processing GIFs: 29% | 86/300 [00:42<01:41, 2.10it/s]
Downloaded: gifs temp/gif 18034.gif
Deleted: gifs temp/gif 18034.gif
Processing GIFs: 29%
                              | 87/300 [00:43<01:37, 2.18it/s]
```

```
Downloaded: gifs temp/gif 6521.gif
Deleted: gifs temp/gif 6521.gif
Processing GIFs: 29%
                              | 88/300 [00:43<01:37, 2.17it/s]
Downloaded: gifs_temp/gif_14794.gif
Deleted: gifs temp/gif 14794.gif
Processing GIFs: 30% | 89/300 [00:44<01:41, 2.08it/s]
Downloaded: gifs_temp/gif_12080.gif
Deleted: gifs temp/gif 12080.gif
Processing GIFs: 30% | 90/300 [00:44<01:41, 2.07it/s]
Downloaded: gifs temp/gif 7926.gif
Deleted: gifs temp/gif 7926.gif
Processing GIFs: 30% | 91/300 [00:45<01:56, 1.79it/s]
Downloaded: gifs temp/gif 82873.gif
Deleted: gifs temp/gif 82873.gif
Processing GIFs: 31%
                              | 92/300 [00:45<01:44, 1.99it/s]
Downloaded: gifs temp/gif 31600.gif
Deleted: gifs temp/gif 31600.gif
Processing GIFs: 31% | 93/300 [00:46<01:39, 2.08it/s]
Downloaded: gifs temp/gif 73996.gif
Deleted: gifs temp/gif 73996.gif
Processing GIFs: 31% | 94/300 [00:46<01:49, 1.89it/s]
Downloaded: gifs temp/gif 57189.gif
Deleted: gifs temp/gif 57189.gif
Processing GIFs: 32% | 95/300 [00:47<01:45, 1.94it/s]
Downloaded: gifs temp/gif 13746.gif
Deleted: gifs temp/gif 13746.gif
Processing GIFs: 32% | 96/300 [00:47<01:43, 1.96it/s]
Downloaded: gifs temp/gif 10272.gif
Deleted: gifs temp/gif 10272.gif
Processing GIFs: 32% | 97/300 [00:48<01:45, 1.93it/s]
Downloaded: gifs temp/gif 15902.gif
Deleted: gifs temp/gif 15902.gif
Processing GIFs: 33%
                              | 98/300 [00:48<01:39, 2.02it/s]
```

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Downloaded: gifs temp/gif 62969.gif
Deleted: gifs temp/gif 62969.gif
Processing GIFs: 33% 99/300 [00:49<01:31, 2.19it/s]
Downloaded: gifs_temp/gif_53007.gif
Deleted: gifs temp/gif 53007.gif
Processing GIFs: 33% | 100/300 [00:49<01:30, 2.20it/s]
Downloaded: gifs temp/gif 44378.gif
Deleted: gifs temp/gif 44378.gif
Processing GIFs: 34% | 101/300 [00:50<01:41, 1.97it/s]
Downloaded: gifs temp/gif 16.gif
Deleted: gifs temp/gif 16.gif
Processing GIFs: 34%| | 102/300 [00:50<01:37, 2.02it/s]
Downloaded: gifs temp/gif 56561.gif
Deleted: gifs temp/gif 56561.gif
Processing GIFs: 34% | 103/300 [00:51<01:33, 2.10it/s]
Downloaded: gifs temp/gif 24501.gif
Deleted: gifs temp/gif 24501.gif
Processing GIFs: 35% | 104/300 [00:51<01:27, 2.24it/s]
Downloaded: gifs temp/gif 3333.gif
Deleted: gifs temp/gif 3333.gif
Processing GIFs: 35% | 105/300 [00:52<01:29, 2.18it/s]
Downloaded: gifs temp/gif_2057.gif
Deleted: gifs temp/gif 2057.gif
Processing GIFs: 35% | 106/300 [00:52<01:28, 2.19it/s]
Downloaded: gifs temp/gif 28853.gif
Deleted: gifs temp/gif 28853.gif
Processing GIFs: 36% | 107/300 [00:52<01:24, 2.29it/s]
Downloaded: gifs temp/gif 12978.gif
Deleted: gifs temp/gif 12978.gif
Processing GIFs: 36% | 108/300 [00:53<01:16, 2.50it/s]
Downloaded: gifs temp/gif 74889.gif
Deleted: gifs temp/gif 74889.gif
Processing GIFs: 36%
                              | 109/300 [00:53<01:27, 2.17it/s]
```

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Downloaded: gifs temp/gif 3886.gif
Deleted: gifs temp/gif 3886.gif
Downloaded: gifs temp/gif 13527.gif
Processing GIFs: 37%
                              | 110/300 [00:54<01:46, 1.79it/s]
Deleted: gifs temp/gif 13527.gif
Processing GIFs: 37%
                              | 111/300 [00:55<01:45, 1.79it/s]
Downloaded: gifs_temp/gif_78527.gif
Deleted: gifs temp/gif 78527.gif
Processing GIFs: 37% | 112/300 [00:55<01:35, 1.96it/s]
Downloaded: gifs temp/gif 82425.gif
Deleted: gifs temp/gif 82425.gif
Processing GIFs: 38%| | 113/300 [00:55<01:28, 2.12it/s]
Downloaded: gifs temp/gif 83200.gif
Deleted: gifs temp/gif 83200.gif
Processing GIFs: 38% | 114/300 [00:56<01:45, 1.76it/s]
Downloaded: gifs temp/gif 70998.gif
Deleted: gifs temp/gif 70998.gif
Processing GIFs: 38% | 115/300 [00:57<01:38, 1.87it/s]
Downloaded: gifs temp/gif 17817.gif
Deleted: gifs temp/gif 17817.gif
Processing GIFs: 39% | 116/300 [00:57<01:32, 1.99it/s]
Downloaded: gifs temp/gif 49770.gif
Deleted: gifs temp/gif 49770.gif
Processing GIFs: 39%| | 117/300 [00:58<01:37, 1.87it/s]
Downloaded: gifs temp/gif 22688.gif
Deleted: gifs temp/gif 22688.gif
Processing GIFs: 39% | 118/300 [00:58<01:41, 1.80it/s]
Downloaded: gifs temp/gif 87229.gif
Deleted: gifs temp/gif 87229.gif
Processing GIFs: 40% | 119/300 [00:59<01:42, 1.77it/s]
Downloaded: gifs temp/gif 52006.gif
Deleted: gifs temp/gif 52006.gif
Processing GIFs: 40%
                              | 120/300 [00:59<01:37, 1.86it/s]
```

```
Downloaded: gifs temp/gif_35344.gif
Deleted: gifs temp/gif 35344.gif
Processing GIFs: 40% | 121/300 [01:00<01:27, 2.04it/s]
Downloaded: gifs_temp/gif_931.gif
Deleted: gifs temp/gif 931.gif
Processing GIFs: 41% | 122/300 [01:00<01:23, 2.14it/s]
Downloaded: gifs temp/gif 61186.gif
Deleted: gifs temp/gif 61186.gif
Processing GIFs: 41% | 123/300 [01:01<01:17, 2.29it/s]
Downloaded: gifs temp/gif 3766.gif
Deleted: gifs temp/gif 3766.gif
Processing GIFs: 41%| | 124/300 [01:01<01:21, 2.15it/s]
Downloaded: gifs temp/gif 71378.gif
Deleted: gifs temp/gif 71378.gif
Processing GIFs: 42% | 125/300 [01:02<01:25, 2.06it/s]
Downloaded: gifs temp/gif 18785.gif
Deleted: gifs temp/gif 18785.gif
Processing GIFs: 42% | 126/300 [01:02<01:20, 2.15it/s]
Downloaded: gifs temp/gif 43033.gif
Deleted: gifs temp/gif 43033.gif
Processing GIFs: 42% | 127/300 [01:03<01:20, 2.15it/s]
Downloaded: gifs temp/gif 48422.gif
Deleted: gifs temp/gif 48422.gif
Processing GIFs: 43% | 128/300 [01:03<01:16, 2.24it/s]
Downloaded: gifs temp/gif 77115.gif
Deleted: gifs temp/gif 77115.gif
Processing GIFs: 43% | 129/300 [01:03<01:21, 2.10it/s]
Downloaded: gifs temp/gif 22133.gif
Deleted: gifs temp/gif 22133.gif
Processing GIFs: 43% | 130/300 [01:04<01:21, 2.09it/s]
Downloaded: gifs_temp/gif_66174.gif
Deleted: gifs temp/gif 66174.gif
Processing GIFs: 44%
                              | 131/300 [01:04<01:23, 2.03it/s]
```

```
Downloaded: gifs_temp/gif_5665.gif
Deleted: gifs temp/gif 5665.gif
Processing GIFs: 44% | 132/300 [01:05<01:27, 1.92it/s]
Downloaded: gifs_temp/gif_88578.gif
Deleted: gifs temp/gif 88578.gif
Processing GIFs: 44% | 133/300 [01:06<01:22, 2.03it/s]
Downloaded: gifs temp/gif 68063.gif
Deleted: gifs temp/gif 68063.gif
Processing GIFs: 45% | 134/300 [01:06<01:16, 2.16it/s]
Downloaded: gifs temp/gif 81900.gif
Deleted: gifs temp/gif 81900.gif
Processing GIFs: 45%| | 135/300 [01:06<01:22, 2.00it/s]
Downloaded: gifs temp/gif 12099.gif
Deleted: gifs temp/gif 12099.gif
Processing GIFs: 45% | | 136/300 [01:07<01:24, 1.95it/s]
Downloaded: gifs temp/gif 8979.gif
Deleted: gifs temp/gif 8979.gif
Processing GIFs: 46% | 137/300 [01:07<01:19, 2.05it/s]
Downloaded: gifs temp/gif 61253.gif
Deleted: gifs temp/gif 61253.gif
Processing GIFs: 46%
                              | 138/300 [01:08<01:16, 2.12it/s]
Downloaded: gifs temp/gif_86939.gif
Deleted: gifs temp/gif 86939.gif
Processing GIFs: 46% | 139/300 [01:08<01:15, 2.13it/s]
Downloaded: gifs temp/gif 122.gif
Deleted: gifs temp/gif 122.gif
Processing GIFs: 47% | 140/300 [01:09<01:13, 2.17it/s]
Downloaded: gifs temp/gif 48622.gif
Deleted: gifs temp/gif 48622.gif
Processing GIFs: 47% | 141/300 [01:09<01:15, 2.12it/s]
Downloaded: gifs temp/gif 57826.gif
Deleted: gifs temp/gif 57826.gif
Processing GIFs: 47%
                              | 142/300 [01:10<01:22, 1.91it/s]
```

```
Downloaded: gifs temp/gif 52250.gif
Deleted: gifs temp/gif 52250.gif
Processing GIFs: 48% | 143/300 [01:10<01:19, 1.96it/s]
Downloaded: gifs_temp/gif_48212.gif
Deleted: gifs temp/gif 48212.gif
Processing GIFs: 48% | 144/300 [01:11<01:12, 2.16it/s]
Downloaded: gifs_temp/gif_88331.gif
Deleted: gifs temp/gif 88331.gif
Processing GIFs: 48% | 145/300 [01:11<01:13, 2.11it/s]
Downloaded: gifs temp/gif 74843.gif
Deleted: gifs temp/gif 74843.gif
Processing GIFs: 49%| | 146/300 [01:12<01:18, 1.97it/s]
Downloaded: gifs temp/gif 30136.gif
Deleted: gifs temp/gif 30136.gif
Processing GIFs: 49% | 147/300 [01:12<01:20, 1.90it/s]
Downloaded: gifs temp/gif 69458.gif
Deleted: gifs temp/gif 69458.gif
Processing GIFs: 49% | 148/300 [01:13<01:12, 2.10it/s]
Downloaded: gifs temp/gif 59703.gif
Deleted: gifs temp/gif 59703.gif
Processing GIFs: 50% | 149/300 [01:13<01:12, 2.09it/s]
Downloaded: gifs temp/gif_20432.gif
Deleted: gifs temp/gif 20432.gif
Processing GIFs: 50%| | 150/300 [01:14<01:12, 2.08it/s]
Downloaded: gifs temp/gif 37522.gif
Deleted: gifs temp/gif 37522.gif
Processing GIFs: 50% | 151/300 [01:14<01:18, 1.91it/s]
Downloaded: gifs temp/gif 51270.gif
Deleted: gifs temp/gif 51270.gif
Processing GIFs: 51% | 152/300 [01:15<01:10, 2.11it/s]
Downloaded: gifs_temp/gif_66309.gif
Deleted: gifs temp/gif 66309.gif
Processing GIFs: 51%
                              | 153/300 [01:15<01:08, 2.14it/s]
```

```
Downloaded: gifs_temp/gif_51441.gif
Deleted: gifs temp/gif 51441.gif
Processing GIFs: 51% | 154/300 [01:16<01:14, 1.95it/s]
Downloaded: gifs_temp/gif_8260.gif
Deleted: gifs temp/gif 8260.gif
Processing GIFs: 52% | 155/300 [01:16<01:14, 1.94it/s]
Downloaded: gifs temp/gif 84297.gif
Deleted: gifs temp/gif 84297.gif
Processing GIFs: 52% | 156/300 [01:17<01:14, 1.94it/s]
Downloaded: gifs temp/gif 79737.gif
Deleted: gifs temp/gif 79737.gif
Processing GIFs: 52% | 157/300 [01:17<01:11, 2.00it/s]
Downloaded: gifs temp/gif 33560.gif
Deleted: gifs temp/gif 33560.gif
Processing GIFs: 53% | | 158/300 [01:18<01:11, 1.98it/s]
Downloaded: gifs temp/gif 42792.gif
Deleted: gifs temp/gif 42792.gif
Processing GIFs: 53% | 159/300 [01:18<01:12, 1.95it/s]
Downloaded: gifs temp/gif 54362.gif
Deleted: gifs temp/gif 54362.gif
Processing GIFs: 53% | 160/300 [01:19<01:09, 2.02it/s]
Downloaded: gifs temp/gif_76786.gif
Deleted: gifs temp/gif 76786.gif
Processing GIFs: 54%| | 161/300 [01:19<01:08, 2.02it/s]
Downloaded: gifs temp/gif 877.gif
Deleted: gifs temp/gif 877.gif
Processing GIFs: 54% | 162/300 [01:20<01:10, 1.97it/s]
Downloaded: gifs_temp/gif_17573.gif
Deleted: gifs temp/gif 17573.gif
Processing GIFs: 54% | 163/300 [01:20<01:03, 2.15it/s]
Downloaded: gifs temp/gif 46838.gif
Deleted: gifs temp/gif 46838.gif
Processing GIFs: 55%
                              | 164/300 [01:21<01:00, 2.25it/s]
```

```
Downloaded: gifs temp/gif 66890.gif
Deleted: gifs temp/gif 66890.gif
Processing GIFs: 55% | 165/300 [01:21<01:03, 2.13it/s]
Downloaded: gifs_temp/gif_74569.gif
Deleted: gifs temp/gif 74569.gif
Processing GIFs: 55% | 166/300 [01:22<01:04, 2.09it/s]
Downloaded: gifs_temp/gif_2065.gif
Deleted: gifs temp/gif 2065.gif
Processing GIFs: 56% | 167/300 [01:22<01:12, 1.82it/s]
Downloaded: gifs temp/gif 65511.gif
Deleted: gifs temp/gif 65511.gif
Processing GIFs: 56% | 168/300 [01:23<01:10, 1.86it/s]
Downloaded: gifs temp/gif 75633.gif
Deleted: gifs temp/gif 75633.gif
Processing GIFs: 56% | | 169/300 [01:23<01:06, 1.97it/s]
Downloaded: gifs temp/gif 66321.gif
Deleted: gifs temp/gif 66321.gif
Processing GIFs: 57% | 170/300 [01:24<01:00, 2.15it/s]
Downloaded: gifs temp/gif 72048.gif
Deleted: gifs temp/gif 72048.gif
Processing GIFs: 57% | 171/300 [01:24<01:00, 2.13it/s]
Downloaded: gifs temp/gif_34305.gif
Deleted: gifs temp/gif 34305.gif
Processing GIFs: 57%| | 172/300 [01:25<00:58, 2.19it/s]
Downloaded: gifs temp/gif 66348.gif
Deleted: gifs temp/gif 66348.gif
Processing GIFs: 58% | 173/300 [01:25<01:06, 1.91it/s]
Downloaded: gifs temp/gif 39809.gif
Deleted: gifs temp/gif 39809.gif
Processing GIFs: 58% | 174/300 [01:26<00:58, 2.14it/s]
Downloaded: gifs_temp/gif_42095.gif
Deleted: gifs temp/gif 42095.gif
Processing GIFs: 58%
                              | 175/300 [01:26<00:57, 2.17it/s]
```

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Downloaded: gifs temp/gif 64926.gif
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Processing GIFs: 59% | 176/300 [01:27<01:01, 2.03it/s]
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Processing GIFs: 59% | 177/300 [01:27<00:58, 2.09it/s]
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Processing GIFs: 61% | 183/300 [01:30<01:04, 1.81it/s]
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Processing GIFs: 62% | 186/300 [01:32<00:59, 1.93it/s]
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Processing GIFs: 63% | 189/300 [01:33<00:57, 1.94it/s]
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Processing GIFs: 64% | 191/300 [01:34<00:56, 1.94it/s]
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Deleted: gifs temp/gif 2179.gif
Processing GIFs: 65%| | 194/300 [01:35<00:50, 2.09it/s]
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Processing GIFs: 65% | | 195/300 [01:36<00:50, 2.09it/s]
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Deleted: gifs temp/gif 8041.gif
Processing GIFs: 65% | 196/300 [01:36<00:51, 2.02it/s]
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Processing GIFs: 66% | | 197/300 [01:37<00:49, 2.09it/s]
```

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Processing GIFs: 66% | 199/300 [01:38<00:44, 2.27it/s]
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Processing GIFs: 67% | 200/300 [01:38<00:44, 2.24it/s]
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Processing GIFs: 68% | 203/300 [01:39<00:42, 2.28it/s]
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Processing GIFs: 68% | 204/300 [01:40<00:40, 2.36it/s]
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Processing GIFs: 69% 207/300 [01:41<00:38, 2.38it/s]
Downloaded: gifs temp/gif 8459.gif
Deleted: gifs temp/gif 8459.gif
Processing GIFs: 69% | 208/300 [01:42<00:38, 2.37it/s]
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Processing GIFs: 70% | 210/300 [01:42<00:38, 2.31it/s]
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Processing GIFs: 70% | 211/300 [01:43<00:43, 2.07it/s]
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Processing GIFs: 74% | 222/300 [01:48<00:37, 2.08it/s]
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Processing GIFs: 75% | 225/300 [01:50<00:36, 2.06it/s]
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Processing GIFs: 75% | 226/300 [01:50<00:35, 2.10it/s]
Downloaded: gifs temp/gif_85167.gif
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Processing GIFs: 76%| | 227/300 [01:51<00:35, 2.05it/s]
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Processing GIFs: 76% | 228/300 [01:51<00:34, 2.08it/s]
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Processing GIFs: 76% 229/300 [01:52<00:44, 1.58it/s]
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```

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```

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Processing GIFs: 83% | 250/300 [02:03<00:31, 1.59it/s]
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Processing GIFs: 84% | 252/300 [02:04<00:25, 1.86it/s]
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Processing GIFs: 84% | 253/300 [02:05<00:25, 1.85it/s]
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Deleted: gifs temp/gif 36523.gif
Processing GIFs: 85% | 254/300 [02:05<00:24, 1.92it/s]
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Deleted: gifs temp/gif 51702.gif
Processing GIFs: 85% | 255/300 [02:06<00:24, 1.86it/s]
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Processing GIFs: 85% | 256/300 [02:06<00:22, 1.95it/s]
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Processing GIFs: 86% | 258/300 [02:08<00:22, 1.83it/s]
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Processing GIFs: 86% | 259/300 [02:08<00:22, 1.86it/s]
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Downloaded: gifs temp/gif 10025.gif
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Processing GIFs: 88%| | 263/300 [02:10<00:18, 1.98it/s]
```

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Processing GIFs: 89% | 266/300 [02:11<00:14, 2.27it/s]
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Processing GIFs: 91% | 272/300 [02:14<00:13, 2.10it/s]
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Processing GIFs: 95% | 285/300 [02:21<00:06, 2.18it/s]
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Processing GIFs: 96% | 287/300 [02:22<00:06, 2.13it/s]
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Processing GIFs: 96% | 288/300 [02:22<00:05, 2.16it/s]
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Processing GIFs: 98%| 293/300 [02:24<00:03, 2.06it/s]
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Processing GIFs: 98% | 294/300 [02:25<00:03, 2.00it/s]
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Deleted: gifs temp/gif 46525.gif
Processing GIFs: 98% 295/300 [02:26<00:02, 1.99it/s]
Downloaded: gifs temp/gif 76129.gif
Deleted: gifs temp/gif 76129.gif
Processing GIFs: 99% | 296/300 [02:26<00:01, 2.14it/s]
```

```
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Deleted: gifs temp/gif 63730.gif
Processing GIFs: 99% 298/300 [02:27<00:00, 2.27it/s]
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Deleted: gifs temp/gif 42786.gif
Processing GIFs: 100% | 299/300 [02:27<00:00, 2.25it/s]
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Deleted: gifs temp/gif 38281.gif
Processing GIFs: 100% | 300/300 [02:28<00:00, 2.02it/s]
Downloaded: gifs temp/gif 13864.gif
Deleted: gifs temp/gif 13864.gif
import torch
import numpy as np
# Assume target frames is the list of GIFs, where each GIF is a list
of frames (each frame is a numpy array)
processed gifs = []
for gif in target frames:
   # Convert list of frames (numpy arrays) into a single numpy array
   frames array = np.array(qif) # Convert to a single numpy array
   # Now convert the numpy array to a PyTorch tensor
   frames tensor = torch.tensor(frames array) # Convert to a PyTorch
tensor
   # Append the processed tensor to the list
   processed gifs.append(frames tensor)
# Now processed gifs is a list of tensors, where each tensor
represents a GIF
```

Saving the data

```
import torch

# Move all tensors in processed_gifs to CPU
processed_gifs_cpu = [gif.cpu() for gif in processed_gifs]
```

```
# Create a dictionary to hold both lists
data = {
    'processed_gifs': processed_gifs_cpu,
    'target_texts': target_texts
}

# Save the dictionary to a file
torch.save(data, 'testdata.pth')
print("Data has been saved successfully as 'data.pth'.")
Data has been saved successfully as 'data.pth'.
```

Loading data when needing

```
import torch
# Load the saved data from the local file
data = torch.load('testdata.pth', map_location=torch.device('cpu')) #
Change 'cpu' to 'cuda' if loading on GPU
processed gifs = data['processed_gifs']
target texts = data['target texts']
print("Data has been loaded successfully from 'data.pth'.")
<ipython-input-2-afe2d304acc8>:4: FutureWarning: You are using
`torch.load` with `weights only=False` (the current default value),
which uses the default pickle module implicitly. It is possible to
construct malicious pickle data which will execute arbitrary code
during unpickling (See
https://github.com/pytorch/pytorch/blob/main/SECURITY.md#untrusted-
models for more details). In a future release, the default value for
`weights_only` will be flipped to `True`. This limits the functions
that could be executed during unpickling. Arbitrary objects will no
longer be allowed to be loaded via this mode unless they are
explicitly allowlisted by the user via
`torch.serialization.add safe globals`. We recommend you start setting
`weights only=True` for any use case where you don't have full control
of the loaded file. Please open an issue on GitHub for any issues
related to this experimental feature.
  data = torch.load('testdata.pth', map location=torch.device('cpu'))
# Change 'cpu' to 'cuda' if loading on GPU
Data has been loaded successfully from 'data.pth'.
import torch
from transformers import BlipProcessor, BlipForConditionalGeneration,
T5Tokenizer, T5ForConditionalGeneration
```

```
# Define device
device = 'cuda' if torch.cuda.is available() else 'cpu'
# Initialize processors and tokenizers
blip processor = BlipProcessor.from pretrained('Salesforce/blip-image-
captioning-base') # Use the same processor used during training
t5 tokenizer = T5Tokenizer.from pretrained('t5-base') # Use the same
tokenizer used during training
# Initialize model architectures
blip model =
BlipForConditionalGeneration.from pretrained('Salesforce/blip-image-
captioning-base') # Ensure architecture matches
t5 model = T5ForConditionalGeneration.from pretrained('t5-base') #
Ensure architecture matches
# Load your trained state dicts
blip model.load state dict(torch.load('/content/drive/MyDrive/Models/7
epochs 1500 GIFs/blip_model.pth', map_location=device))
t5 model.load state dict(torch.load('/content/drive/MyDrive/Models/7
epochs 1500 GIFs/t5 model.pth', map location=device))
# Move models to device
blip model.to(device)
t5 model.to(device)
# Set models to evaluation mode
blip model.eval()
t5 model.eval()
print("Trained models loaded successfully.")
/usr/local/lib/python3.10/dist-packages/huggingface hub/utils/
token.pv:89: UserWarning:
The secret `HF TOKEN` does not exist in your Colab secrets.
To authenticate with the Hugging Face Hub, create a token in your
settings tab (https://huggingface.co/settings/tokens), set it as
secret in your Google Colab and restart your session.
You will be able to reuse this secret in all of your notebooks.
Please note that authentication is recommended but still optional to
access public models or datasets.
 warnings.warn(
{"model id":"1cca8ed00b474e4eb1fde48be11fe0e6","version major":2,"vers
ion minor":0}
{"model id":"16d2092fc98a40f39cb52c3025c9080c","version major":2,"vers
ion minor":0}
{"model id": "79707f34f3e44e03a46d32a2a3351bea", "version major": 2, "vers
ion minor":0}
```

```
{"model id": "6ab240a78d254f639ec2f402c51200d1", "version major": 2, "vers
ion minor":0}
{"model id":"36292890d63748ba96f9be03116a9ff9","version major":2,"vers
ion minor":0}
/usr/local/lib/python3.10/dist-packages/transformers/
tokenization utils base.py:1601: FutureWarning:
`clean_up_tokenization_spaces` was not set. It will be set to `True`
by default. This behavior will be depracted in transformers v4.45, and
will be then set to `False` by default. For more details check this
issue: https://github.com/huggingface/transformers/issues/31884
  warnings.warn(
{"model id":"7f0cff6cdf604df6acb7c9831b3c2195","version major":2,"vers
ion minor":0}
{"model id": "elfea57e07d4491cbfd7ffa93d4cfa4f", "version major": 2, "vers
ion minor":0}
{"model id": "a2bedb4dc0974eca84957e8e0e1b1d45", "version major": 2, "vers
ion minor":0}
You are using the default legacy behaviour of the <class
'transformers.models.t5.tokenization t5.T5Tokenizer'>. This is
expected, and simply means that the `legacy` (previous) behavior will
be used so nothing changes for you. If you want to use the new behaviour, set `legacy=False`. This should only be set if you
understand what it means, and thoroughly read the reason why this was
added as explained in
https://github.com/huggingface/transformers/pull/24565
{"model id": "39a855d225664b7d9dc9b1482e470d32", "version major": 2, "vers
ion minor":0}
{"model id": "58e5d9cd31f44ef491db612b93b893b4", "version major": 2, "vers
ion minor":0}
{"model id": "a540c65c048b4f48b6e82835a5024fc4", "version major": 2, "vers
ion minor":0}
{"model id":"a4f6e6f55a604833a8b2306e980a7955","version major":2,"vers
ion minor":0}
<ipython-input-3-b78857e42f4b>:16: FutureWarning: You are using
`torch.load` with `weights_only=False` (the current default value),
which uses the default pickle module implicitly. It is possible to
construct malicious pickle data which will execute arbitrary code
during unpickling (See
https://github.com/pytorch/pytorch/blob/main/SECURITY.md#untrusted-
models for more details). In a future release, the default value for
`weights only` will be flipped to `True`. This limits the functions
```

```
that could be executed during unpickling. Arbitrary objects will no
longer be allowed to be loaded via this mode unless they are
explicitly allowlisted by the user via
`torch.serialization.add_safe_globals`. We recommend you start setting
`weights only=True` for any use case where you don't have full control
of the loaded file. Please open an issue on GitHub for any issues
related to this experimental feature.
blip model.load state dict(torch.load('/content/drive/MyDrive/Models/7
epochs 1500 GIFs/blip model.pth', map location=device))
<ipython-input-3-b78857e42f4b>:17: FutureWarning: You are using
`torch.load` with `weights only=False` (the current default value),
which uses the default pickle module implicitly. It is possible to
construct malicious pickle data which will execute arbitrary code
during unpickling (See
https://github.com/pytorch/pytorch/blob/main/SECURITY.md#untrusted-
models for more details). In a future release, the default value for
`weights_only` will be flipped to `True`. This limits the functions
that could be executed during unpickling. Arbitrary objects will no
longer be allowed to be loaded via this mode unless they are
explicitly allowlisted by the user via
`torch.serialization.add_safe_globals`. We recommend you start setting
`weights_only=True` for any use case where you don't have full control
of the loaded file. Please open an issue on GitHub for any issues
related to this experimental feature.
  t5 model.load state dict(torch.load('/content/drive/MyDrive/Models/7
epochs 1500 GIFs/t5 model.pth', map location=device))
Trained models loaded successfully.
import torch
import numpy as np
from torch.utils.data import Dataset
class GifAggregationDataset(Dataset):
   def init (self, frames list, targets, tokenizer,
max target length=150):
        frames list: A list of lists containing frames (as tensors or
numpy arrays) for each GIF.
        targets: The ground truth captions for each GIF.
        tokenizer: Tokenizer for T5 to encode the target captions.
       max target length: Maximum length for the target text
sequences.
       self.frames list = frames list # List of frame sequences
(e.g., list of tensors for each GIF)
        self.targets = targets # Ground truth captions for each GIF
        self.tokenizer = tokenizer
        self.max target length = max target length
```

```
def len (self):
        return len(self.frames_list)
    def getitem (self, idx):
        # Get frames and target for the given index
        frames = self.frames list[idx] # List or tensor of frames for
a single GIF
        target text = self.targets[idx]
        # Ensure frames are in the correct shape (num frames, height,
width, channels)
        if isinstance(frames, list):
            # Convert list of numpy arrays to a single numpy array, if
necessary
            frames = np.array(frames)
        # If frames are numpy arrays, convert to torch tensor and make
sure dimensions are correct
        if isinstance(frames, np.ndarray):
            frames = torch.tensor(frames, dtype=torch.float32) #
Convert to float32 tensor for PyTorch
        # Reshape or permute frames to ensure the shape is
(num frames, height, width, channels)
        if frames.ndim == 4 and frames.shape[-1] == 3:
            # Shape is (num frames, height, width, channels), which is
correct for PIL conversion
        elif frames.ndim == 4 and frames.shape[1] == 3:
            # If frames have shape (num frames, channels, height,
width), change to (num frames, height, width, channels)
            frames = frames.permute(0, 2, 3, 1) # (N, C, H, W) -> (N,
H, W, C)
        # Tokenize the target caption (ground-truth description)
        target encoding = self.tokenizer(
            target text,
            padding='max length',
            truncation=True,
            max length=self.max target length,
            return_tensors="pt"
        )
        # Replace padding token ID's of the labels by -100 to ignore
them in the loss
        labels = target encoding.input ids.squeeze()
        labels[labels == self.tokenizer.pad token id] = -100
        return {
```

```
'frames': frames, # Provide frames directly in tensor
format (num frames, height, width, channels)
            'labels': labels, # Provide tokenized ground truth
captions for T5
            'reference description': target text
# Define the Test Dataset
test dataset = GifAggregationDataset(
    frames_list=processed_gifs, # List of tensors representing
frames for each test GIF
   targets=target_texts, # Ground truth aggregated captions
for test GIFs
   tokenizer=t5_tokenizer, # Tokenizer for processing
target texts
   max_target_length=150
                                       # Max length for target
captions
)
# Create the Test DataLoader
test dataloader = DataLoader(
   test dataset,
   batch size=16, # Adjust based on GPU memory; 16 is
consistent with your train/val
   shuffle=False,
num_workers=0,
# No need to shuffle test data
# Set >0 if using multiple CPU cores for
faster data loading
   pin memory=True # Speeds up data transfer to GPU
import torch
from tqdm import tqdm
from rouge score import rouge scorer
from nltk.translate.bleu score import corpus bleu
from nltk.translate.meteor score import meteor score
import bert score
from PIL import Image
def evaluate model(blip model, t5 model, blip processor, tokenizer,
dataloader, device='cuda' if torch.cuda.is available() else 'cpu'):
   blip model.eval() # Set BLIP to evaluation mode
   t5 model.eval() # Set T5 to evaluation mode
   # Metrics containers
   all references = []
   all candidates = []
    rouge1 scores = []
    rouge2 scores = []
    rougeL_scores = []
   # meteor scores list = []
```

```
# ROUGE scorer initialization
    scorer = rouge scorer.RougeScorer(['rouge1', 'rouge2', 'rougeL'],
use stemmer=True)
    # BERTScore
    bert_score_fn = bert_score.score
    with torch.no grad():
        for batch in tqdm(dataloader, desc="Evaluating"):
            # Step 1: Prepare frames for BLIP
            frames = batch['frames'] # Assuming shape [batch size,
num frames, C, H, W] or [batch size, num frames, H, W, C]
            reference descriptions = batch['reference description'] #
List of reference captions
            batch size, num frames = frames.shape[0], frames.shape[1]
            frame captions = []
            for i in range(batch_size):
                single captions = []
                for j in range(num frames):
                    frame = frames[i, j] # Shape depends on data
format
                    # Determine frame shape and permute if necessary
                    if frame.ndim == 3:
                        # Possible shapes:
                        # [C, H, W] or [H, W, C]
                        if frame.shape[0] == 3:
                            \# [C, H, W] -> [H, W, C]
                            frame = frame.permute(1, 2, 0)
                        # Else assume [H, W, C], no change needed
                    else:
                        raise ValueError(f"Unexpected frame shape:
{frame.shape}")
                    # Convert to CPU and numpy
                    frame np = frame.cpu().numpy().astype('uint8') #
Ensure dtype is uint8
                    # Convert to PIL Image
                        img = Image.fromarray(frame np).convert('RGB')
                    except Exception as e:
                        print(f"Error converting frame to image: {e}")
                        continue # Skip this frame
                    # Generate caption using BLIP
```

```
inputs = blip processor(img,
return tensors="pt").to(device)
                    outputs = blip model.generate(**inputs,
max length=50) # Limit caption length
                    caption = blip processor.decode(outputs[0],
skip special tokens=True)
                    single captions.append(caption)
                # Concatenate captions for the current example
                concatenated_caption = " ".join(single_captions)
                frame captions.append(concatenated caption)
            # Step 2: Tokenize the concatenated captions as a batch
            max length = 128 # Adjust based on GPU capacity and
desired sequence length
            t5 inputs = tokenizer(
                frame captions, # List of concatenated captions, one
per example in the batch
                max_length=max_length,
                padding='max length',
                truncation=True,
                return tensors="pt"
            ).to(device)
            # Step 3: Generate predictions using T5
            outputs = t5 model.generate(
                input ids=t5 inputs.input ids,
                attention mask=t5 inputs.attention mask,
                max length=150,
                num beams=4,
                early stopping=True
            )
            # Step 4: Decode predictions
            predictions = tokenizer.batch decode(outputs,
skip special tokens=True)
            # Step 5: Evaluate the predictions
            for ref, pred in zip(reference descriptions, predictions):
                ref tokens = ref.split()
                pred tokens = pred.split()
                # Append references and predictions for BLEU
                all references.append([ref tokens])
                all candidates.append(pred tokens)
                # ROUGE scores calculation
                scores = scorer.score(ref, pred)
                rouge1 scores.append(scores['rouge1'].fmeasure)
                rouge2 scores.append(scores['rouge2'].fmeasure)
```

```
rougeL scores.append(scores['rougeL'].fmeasure)
                # METEOR score calculation
                # meteor = meteor score([ref tokens], pred tokens)
                # meteor scores list.append(meteor)
    # Calculate BLEU score
    bleu = corpus bleu(all references, all candidates)
    # Calculate average ROUGE scores
    avg rouge1 = sum(rouge1 scores) / len(rouge1 scores) if
rougel scores else 0
    avg rouge2 = sum(rouge2 scores) / len(rouge2 scores) if
rouge2 scores else 0
    avg rougeL = sum(rougeL scores) / len(rougeL scores) if
rougeL scores else 0
    # Calculate average METEOR score
    # avg meteor = sum(meteor scores list) / len(meteor scores list)
if meteor_scores_list else 0
    # Calculate BERT Score
    P, R, F1 = bert score fn(
        [' '.join(cand) for cand in all_candidates],
        [' '.join(ref[0]) for ref in all references],
        lang='en',
        verbose=True)
    avg_bert_f1 = F1.mean().item()
    # Compile metrics
    metrics = {
        'BLEU': bleu,
        'ROUGE-1': avg rouge1,
        'ROUGE-2': avg rouge2,
        'ROUGE-L': avg_rougeL,
        # 'METEOR': avg meteor,
        'BERT F1': avg bert f1
    }
    return metrics
# After training each epoch, evaluate the model on the validation set
metrics = evaluate model(blip model, t5 model, blip processor,
t5 tokenizer, test dataloader, device)
print(f"Test Metrics Model V1: {metrics}")
Evaluating: 100%| | 19/19 [05:35<00:00, 17.64s/it]
{"model id": "2124da18db994d15bef3deaa5c4feaf7", "version major": 2, "vers
ion minor":0}
```

```
{"model id": "6eedb33aca474220b7bc82800f3a3ca4", "version major": 2, "vers
ion minor":0}
{"model id":"fa13dbf6a4ee4ed0a26fd748f417ea58","version major":2,"vers
ion minor":0}
{"model id": "93d351ddb754421785224b69005a5e56", "version major": 2, "vers
ion minor":0}
{"model id":"bf5bcb2ac65f4dcba23da1b02c1298b0","version major":2,"vers
ion minor":0}
{"model id": "940a283e47ad4c4c8d4540b294553421", "version major": 2, "vers
ion minor":0}
Some weights of RobertaModel were not initialized from the model
checkpoint at roberta-large and are newly initialized:
['roberta.pooler.dense.bias', 'roberta.pooler.dense.weight']
You should probably TRAIN this model on a down-stream task to be able
to use it for predictions and inference.
calculating scores...
computing bert embedding.
{"model id":"67faee434a7348bfa29ced3324853d16","version major":2,"vers
ion minor":0}
computing greedy matching.
{"model id":"fa3cedafa6194ceaa18e99e11c8dc779","version major":2,"vers
ion minor":0}
done in 2.36 seconds, 126.96 sentences/sec
Test Metrics Model V1: {'BLEU': 0.06812399819740517, 'ROUGE-1':
0.36283740952837173, 'ROUGE-2': 0.1208941130679991, 'ROUGE-L':
0.32716171295477103, 'BERT F1': 0.9016732573509216}
# After training each epoch, evaluate the model on the validation set
metrics = evaluate model(blip model, t5 model, blip processor,
t5 tokenizer, test dataloader, device)
print(f"Test Metrics Model V2: {metrics}")
Evaluating: 100%
                         | 19/19 [05:37<00:00, 17.74s/it]
Some weights of RobertaModel were not initialized from the model
checkpoint at roberta-large and are newly initialized:
['roberta.pooler.dense.bias', 'roberta.pooler.dense.weight']
You should probably TRAIN this model on a down-stream task to be able
to use it for predictions and inference.
calculating scores...
computing bert embedding.
```

```
{"model id": "6e5082b791d345f49446b2216b353508", "version major": 2, "vers
ion minor":0}
computing greedy matching.
{"model id":"2e37e58291cc4bf0a4c3565c56ec5b50","version major":2,"vers
ion minor":0}
done in 1.67 seconds, 179.13 sentences/sec
Test Metrics Model V2: {'BLEU': 0.06812399819740517, 'ROUGE-1':
0.36283740952837173, 'ROUGE-2': 0.1208941130679991, 'ROUGE-L':
0.32716171295477103, 'BERT F1': 0.9016732573509216}
# After training each epoch, evaluate the model on the validation set
metrics = evaluate model(blip model, t5 model, blip processor,
t5 tokenizer, test dataloader, device)
print(f"Test Metrics Model V3: {metrics}")
Evaluating: 100% | 100% | 19/19 [05:42<00:00, 18.02s/it]
Some weights of RobertaModel were not initialized from the model
checkpoint at roberta-large and are newly initialized:
['roberta.pooler.dense.bias', 'roberta.pooler.dense.weight']
You should probably TRAIN this model on a down-stream task to be able
to use it for predictions and inference.
calculating scores...
computing bert embedding.
{"model id":"23f23193bc484acb9539b736b784ed5a","version major":2,"vers
ion minor":0}
computing greedy matching.
{"model id": "95724340d2d44e70b41a8290851d2f83", "version major": 2, "vers
ion minor":0}
done in 1.51 seconds, 198.45 sentences/sec
Test Metrics Model V3: {'BLEU': 0.06573281519797997, 'ROUGE-1':
0.3650295021009056, 'ROUGE-2': 0.12514736381462965, 'ROUGE-L':
0.33186308303216555, 'BERT F1': 0.9034396409988403}
```