

# News Summarization Application Using Fine-Tuned T5

## Transformer Model

- In this project we have built a news summarization application on Streamlit. This application summarizes live news articles which are fetched using Google News RSS feed
- We have used the CNN/Daily Mail news dataset ([https://huggingface.co/datasets/cnn\\_dailymail](https://huggingface.co/datasets/cnn_dailymail)) for fine-tuning the T5 transformer.
- This fine-tuned model is then used to build a summarization application on Streamlit

## Code for fine-tuning T5 transformer model:

```
import pandas as pd
```

```
! pip install datasets transformers rouge-score nltk -q
```

```

|██████████| 451 kB 5.2 MB/s
|██████████| 5.5 MB 71.3 MB/s
|██████████| 115 kB 75.4 MB/s
|██████████| 212 kB 82.1 MB/s
|██████████| 182 kB 82.2 MB/s
|██████████| 127 kB 81.0 MB/s
|██████████| 7.6 MB 60.6 MB/s

```

```
Building wheel for rouge-score (setup.py) ... done
```

```
pip install huggingface_hub -q
```

```

Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Requirement already satisfied: huggingface_hub in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: typing-extensions>=3.7.4.3 in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: filelock in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: requests in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: importlib-metadata in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: pyyaml>=5.1 in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: tqdm in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: packaging>=20.9 in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: pyparsing!=3.0.5,>=2.0.2 in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: zipp>=0.5 in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: chardet<4,>=3.0.2 in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: urllib3!=1.25.0,!1.25.1,<1.26,>=1.21.1 in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: idna<3,>=2.5 in /usr/local/lib/python3.7/dist-packages

```

```
#Connecting hugging face account to the notebook to save the model in hugging face hub
```

```
from huggingface_hub import notebook_login
```

```
notebook_login()
```

```
Token is valid.
```

```
Your token has been saved in your configured git credential helpers (store).
```

```
Your token has been saved to /root/.huggingface/token
```

```
Login successful
```

```
import datasets
```

```
!apt install git-lfs
```

```
Reading package lists... Done
```

```
Building dependency tree
```

```
Reading state information... Done
```

```
git-lfs is already the newest version (2.3.4-1).
```

```
The following package was automatically installed and is no longer required:
```

```
  libnvidia-common-460
```

```
Use 'apt autoremove' to remove it.
```

```
0 upgraded, 0 newly installed, 0 to remove and 5 not upgraded.
```

```
import transformers
```

```
print(transformers.__version__)
```

```
4.24.0
```

```
model_checkpoint = "t5-small"
```

```
#Importing the CNN/Daily Mail dataset
```

```
from datasets import load_dataset, load_metric
```

```
raw_datasets = load_dataset("cnndailymail", '3.0.0')
```

```
metric = load_metric("rouge")
```

```

Downloading builder script: 100% 8.33k/8.33k [00:00<00:00, 30k/s]
Downloading metadata: 100% 9.88k/9.88k [00:00<00:00, 352kB/s]
Downloading readme: 100% 15.1k/15.1k [00:00<00:00, 539kB/s]
Downloading and preparing dataset cnn_dailymail/3.0.0 to /root/.cache/huggingface/datasets
Downloading data files: 100% 5/5 [00:15<00:00, 2.15s/it]
Downloading data: 100% 159M/159M [00:02<00:00, 55.9MB/s]
Downloading data: 100% 376M/376M [00:06<00:00, 62.7MB/s]
Downloading data: 100% 46.4M/46.4M [00:00<00:00, 79.4MB/s]

```

```
#Looking at the contents of the dataset
```

```
raw_datasets
```

```

DatasetDict({
  train: Dataset({
    features: ['article', 'highlights', 'id'],
    num_rows: 287113
  })
  validation: Dataset({
    features: ['article', 'highlights', 'id'],
    num_rows: 13368
  })
  test: Dataset({
    features: ['article', 'highlights', 'id'],
    num_rows: 11490
  })
})

```

```
#Having a look at one row from the train dataset
```

```
raw_datasets["train"][0]
```

```
{'article': 'LONDON, England (Reuters) -- Harry Potter star Daniel Radcliffe gains access to a reported £20 million ($41.1 million) fortune as he turns 18 on Monday, but he insists the money won\'t cast a spell on him. Daniel Radcliffe as Harry Potter in "Harry Potter and the Order of the Phoenix" To the disappointment of gossip columnists around the world, the young actor says he has no plans to fritter his cash away on fast cars, drink and celebrity parties. "I don\'t plan to be one of those people who, as soon as they turn 18, suddenly buy themselves a massive sports car collection or something similar," he told an Australian interviewer earlier this month. "I don\'t think I\'ll be particularly extravagant. "The things I like buying are things that cost about 10 pounds -- books and CDs and DVDs." At 18, Radcliffe will be able to gamble in a casino, buy a drink in a pub or see the horror film "Hostel: Part II," currently six places below his number one movie on the UK box office chart. Details of how he\'ll mark his landmark birthday are under wraps. His agent and publicist had no comment on his plans. "I\'ll definitely have some sort of party," he said in an interview. "Hopefully none of you will be reading about it." Radcliffe\'s earnings from the first five Potter films have been held in a trust fund which he has not been able to touch. Despite his growing fame and riches, the actor
```

says he is keeping his feet firmly on the ground. "People are always looking to say \'kid star goes off the rails,\'" he told reporters last month. "But I try very hard not to go that way because it would be too easy for them." His latest outing as the boy wizard in "Harry Potter and the Order of the Phoenix" is breaking records on both sides of the Atlantic and he will reprise the role in the last two films. Watch I-Reporter give her review of Potter\'s latest » . There is life beyond Potter, however. The Londoner has filmed a TV movie called "My Boy Jack," about author Rudyard Kipling and his son, due for release later this year. He will also appear in "December Boys," an Australian film about four boys who escape an orphanage. Earlier this year, he made his stage debut playing a tortured teenager in Peter Shaffer\'s "Equus." Meanwhile, he is braced for even closer media scrutiny now that he\'s legally an adult: "I just think I\'m going to be more sort of fair game," he told Reuters. E-mail to a friend . Copyright 2007 Reuters. All rights reserved. This material may not be published, broadcast, rewritten, or redistributed.',

'highlights': "Harry Potter star Daniel Radcliffe gets £20M fortune as he turns 18 Monday .\nYoung actor says he has no plans to fritter his cash away .\nRadcliffe's earnings from first five Potter films have been held in trust fund .",

'id': '42c027e4ff9730fbb3de84c1af0d2c506e41c3e4'}

```
import datasets
import random
import pandas as pd
from IPython.display import display, HTML

def show_random_elements(dataset, num_examples=5):
    assert num_examples <= len(dataset), "Can't pick more elements than there are in t
    picks = []
    for _ in range(num_examples):
        pick = random.randint(0, len(dataset)-1)
        while pick in picks:
            pick = random.randint(0, len(dataset)-1)
        picks.append(pick)

    df = pd.DataFrame(dataset[picks])
    for column, typ in dataset.features.items():
        if isinstance(typ, datasets.ClassLabel):
            df[column] = df[column].transform(lambda i: typ.names[i])
    display(HTML(df.to_html()))

#Displaying the contents of the CNN/Daily Mail dataset

show_random_elements(raw_datasets["train"])
```

At first glance, it looks like a perfectly normal helicopter. But Northrop Grumman's new MQ-8C Fire Scout is missing one key thing - a pilot. The craft, shown off at a trade show this week, has been stuffed with electronics so it can be flown as a drone - but with all the same capabilities as a normal helicopter. Model of an MQ-8C Fire Scout from the Northrop Grumman display at the Sea-Air-Space Expo 2013. The MQ-8C Fire Scout looks almost identical to a normal helicopter - but is in fact a drone. The ultimate drone in number. The MQ-8C Fire Scout is a fully autonomous, four-blade, single-engine unmanned helicopter. 'It will carry an array of reconnaissance, surveillance and target acquisition (RSTA) sensors to support warfighting demands for enhanced situational awareness,' the firm said. 'The craft combines the best of two previous systems in a low-cost, fast-fielding package,' said the defence firm. Earlier this year the US Navy awarded Northrop Grumman a \$71 million contract to procure six additional MQ-8C Fire-X variants, for a total of 10 aircraft. George Vardoulakis, vice president for tactical unmanned systems with Northrop Grumman Aerospace Systems sector said, 'this contract provides significant momentum for the work Northrop Grumman and its supply chain partners are doing to meet the Navy's requirements.' An artist's impression of the MQ-8C Fire Scout in action. The drone is based on a Bell 407 helicopter, which is often used by hospitals, police organizations, movie studios and law enforcement agencies worldwide. Over 1,000 have been sold worldwide over 3 million accumulated flight hours - but now it is undergoing a radical conversion. 'Fire Scout supports both maritime and land-based missions, taking off and landing on aviation-capable warships, and is prepared for both prepared and unprepared landing zones in proximity to ground troops. A scale model of the MQ-8C Fire Scout was revealed, and it is hoped the real thing could be flying this year. The complex electronics that replace the pilot the helicopter removed.

(CNN) -- A 2-year-old boy who was reportedly the son of Minnesota Vikings star Adrian Peterson died from injuries he suffered after allegedly being abused, police said. Sioux Falls, South Dakota, police said. Robert Patterson, 27, has been charged with aggravated battery of an infant and aggravated assault. If convicted on the charges, both felonies, Patterson could face up to 40 years in prison and an \$80,000 fine. Prosecutors are considering filing additional charges against Patterson in light of the boy's death, according to police. Soon after the news came out of the boy's death, Adrian Peterson took to Twitter to express his gratitude to his family, fans and the "fraternity of brothers" in the NFL for their support. "God Bless everyone and thank u so much," he wrote. Patterson called authorities about 5:45 p.m. Wednesday to report that the 2-year-old was choking in his Sioux Falls apartment, police spokesman Sam Clemens said. Officers arrived to find the toddler unresponsive, and he was rushed to a nearby hospital. Authorities determined that the boy had suffered injuries to his head consistent with abuse, according to Clemens. Police said Patterson, whom they described as the boyfriend of the injured child's mother, was the only other person in the residence at the time. The suspect -- who was given suspended sentences a year ago for simple domestic assault and violation of a domestic abuse bond, both misdemeanors -- was arrested Thursday night, said Lincoln County, South Dakota, State's Attorney Tom Wollman. A judge set his bail at \$750,000 cash during his initial appearance Friday, according to Clemens. The 2-year-old's mother is not under investigation, Clemens added. "This is an absolute tragedy," Wollman said Friday, "and the parents and the extended family are suffering greatly." Authorities have declined to name the child, with police saying that information is being withheld out of respect for the family and to give them time to make notification. Peterson's father, Norman Peterson, told the St. Paul Pioneer Press that the injured toddler is his grandson and Adrian's son. Norman Peterson did not identify the boy by name except to say he was not Adrian Peterson Jr. The 2012 NFL Valuable Player himself did not elaborate on what happened when addressing reporters earlier Friday, but which time the child was in critical condition. But he did acknowledge that he was dealing with "a pretty difficult matter," adding that he still plans to play in Sunday's game against the Carolina Panthers. "I will ask you to please just respect my privacy," Peterson said. Even if he wasn't talking, many athletes were. The Washington Redskins' Robert Griffin III and Houston Texans' defense lineman J.J. Watt were among Peterson's competitors who expressed condolences online, as well as their shock at what happened. Among the most vocal was LeBron James, who has won the NBA's MVP award four of the past five seasons. Declaring himself a buddy will get what's coming to him!!" -- an apparent reference to the suspect -- James expressed the sympathy he felt, as a young father himself, while offering support to his friend. "So Damn sad man!" the Miami Heat star tweeted. "Makes no sense at all. Innocent kid with dreams gets taking away by a coward with no dreams at all! Smh #SickForAP." CNN's Cristy Lenz and Shawn Nottingham contributed to this report.

It's not the first thing most women think of when they go shopping for their smalls. But for Karen Danczuk was just another chance for a photo opportunity. After browsing aisles bursting with barely-there outfit 31-year-old picked out a revealing red and black corset - then whipped out her phone to share the moment with her online fans. It took just a matter of hours for the councillor to post the fruits of her labour on Twitter with a shameless plug for the lingerie store thrown in for good measure. Scroll down for video .

opportunity: Karen Danczuk went shopping for lingerie today - but used the outing as another bit of shrewd self-promotion . Mrs Danczuk, the 31-year-old wife of Labour MP Simon Danczuk, doing a spot of lingerie shopping with her friend, believed to be Nicollette North . Selfie queen: The self-confessed 'Queen of Selfies' (left and right) posed for a series of obligatory selfies, complete with saucy pouts, to add to her expanding selfie gallery . Strike a pose: The mother-of-two couldn't resist stopping to take a few photos of herself in her new outfit . Slinky: She spent the morning trying on the slinky corset at bespoke lingerie Chantilly, in Rochdale . Red: She later posted these selfies on her Twitter saying: 'I'm Labour through and through! I even bought the underwear to prove it' She posted: 'I'm Labour through and through! I even bought the underwear to prove it. KD #intellingthetruth'. She also linked her tweets twice to the shop, before giving a shout out to her friend Nicollette North, who had watched on as Mrs Danczuk struck a number of pouting poses in her snug-fitting corset. It's hardly surprising that Mrs Danczuk chose to turn her shopping trip turned into yet another opportunity to add to her ever-expanding gallery of selfies. The mother-of-two shot to fame last year after posting dozens of risque pictures - mostly showcasing her generous cleavage - to her 35,000 followers on Twitter. Her pictures, which range from make-up free poses to fully glammed-up nights out, have helped to propel her to the position of one of the most famous women in public life. But along the way she has drawn her share of brickbats, including among critics who accuse her of cheapening British politics. On show: Some might ask whether the basque-like one-piece is becoming for a wife of one of Her Majesty's Loyal Opposition . Snug fit: Mrs Danczuk asked Ms North, mother-of-two, to make adjustments to her chosen corset . Adjusting to the new look: The councillor was seen and about in Rotherham picking out her new attire . Be my Valentine? The images could cause a stir among hopefuls who are in the middle of furiously bidding to take the mother-of-two out on a date on Valentine's this Saturday . Mrs Danczuk has previously been called 'the most embarrassing wife in Westminster' by former Conservative MP Louise Mensch - and these images will do nothing to help her cause. Ms Mensch also branded Mrs Danczuk a 'trowel' over the amount of make-up she uses. Some might also question whether the basque-like one-piece is becoming for a councillor and wife of a high-profile figure in Her Majesty's Official Opposition. But Mrs Danczuk appears to be undeterred by the criticism, as these images show. In another bid for self-promotion, Mrs Danczuk this week announced she would take 'one lucky woman' on a date this Saturday for Valentine's day, depending on who bid the most for the privilege. In the pink: The mother-of-two picked up an eye-catching pink and black number while browsing . Which one? Mrs Danczuk (left and right) asks her friend for some advice over her raunchy underwear . Animal: The councillor considered trying on an animal-print bra and brief combination . Winner: The councillor appeared to be taken with the basque-like red and black corset . Before the undressing: Mrs Danczuk and her friend were seen this morning shopping in Rochdale . Success: The MP's wife looked pleased as she left the shop carrying numerous bags of her new purchases . Her fans launched a furious bidding war, bringing the highest bid to £10,300. Today, Mrs Danczuk also took a swipe at beleaguered Labour deputy leader Harriet Harman. Ms Harman had already come under fire this week for the party's use of an all-female pink battle bus to engage with women voters. In the wake of the outcry, Mrs Danczuk told MailOnline how Miss Harman allegedly told her she was 'far too pretty to be interested in politics' and should join a girl band instead of doing something the deputy Labour leader denies. Costume change: Mrs Danczuk was later seen in jeans and a denim shirt unbuttoned to her bosoms as she went out for lunch in Rochdale following her lingerie shopping trip . Mrs Danczuk, who has represented the Kingsway ward on Rochdale council since 2011, announced last month that she was standing down as a councillor at the next election to pursue other opportunities. She has already hired London-based agent Ginger Comms and is understood to be interested in pursuing TV work. Mrs Danczuk also hit the headlines last year when she started selling signed pictures of herself posing in a bikini on eBay. But the £10 pictures were criticised by many buyers for being poor quality.

(CNN) -- All around the world today, people are in the early hours of trying to keep their New Year's resolutions: Lose that 15 pounds, find that job that will make you happy, move to that city where you've always dreamed of living. There is one kind of resolution, though, that very few of us will ever be in a position to make. Somewhere today, someone at the very pinnacle of his or her career is thinking of doing in 2012 what Tony La Russa did in 2011: . Get out on top. Willingly walk away and declare victory. Leave the table when the dice are still hot. La Russa was the manager of the St. Louis Cardinals who, within days of guiding his team to the World Series, decided to leave the game.

victory in the World Series, announced that he was done. It has never happened before in baseball, according to historians of the sport. No manager before La Russa ever retired in the same calendar year his team won the Series. Human nature tells us to hang on while success is at its peak. You don't see many CEOs who have just led their corporations to record profits say: I have nothing left to prove. I'm through -- it's been done. Who does that, when further riches and accolades await? The inner knowledge that things may never be good again competes against the thought that cruising speed can be exceedingly comfortable once you have made it to the apex. Who reaches the top of the mountain and then, with the cheers still ringing, decides to climb more mountaintops for me? It happens in sports, once in a great while. Rocky Marciano retired from boxing in 1956 as undefeated heavyweight champion of the world. Jim Brown walked away from professional football after the 1965 season while still the best running back in the sport. They had won the game. It was all over. The

metric

```
Metric(name: "rouge", features: {'predictions': Value(dtype='string', id='sequence'), 'references': Value(dtype='string', id='sequence')}, usage: """
Calculates average rouge scores for a list of hypotheses and references
```

Args:

```
    predictions: list of predictions to score. Each prediction
                  should be a string with tokens separated by spaces.
    references: list of reference for each prediction. Each
                reference should be a string with tokens separated by spaces.
    rouge_types: A list of rouge types to calculate.
```

Valid names:

```
    ~"rouge{n}"~ (e.g. ~"rouge1"~, ~"rouge2"~) where: {n} is the n-gram
based scoring,
    ~"rougeL"~: Longest common subsequence based scoring.
    ~"rougeLsum"~: rougeLsum splits text using ~"
```

"".

See details in <https://github.com/huggingface/datasets/issues/617>

```
    use_stemmer: Bool indicating whether Porter stemmer should be used to strip
word suffixes.
```

```
    use_aggregator: Return aggregates if this is set to True
```

Returns:

```
    rouge1: rouge_1 (precision, recall, f1),
    rouge2: rouge_2 (precision, recall, f1),
    rougeL: rouge_l (precision, recall, f1),
    rougeLsum: rouge_lsum (precision, recall, f1)
```

Examples:

```
>>> rouge = datasets.load_metric('rouge')
>>> predictions = ["hello there", "general kenobi"]
>>> references = ["hello there", "general kenobi"]
>>> results = rouge.compute(predictions=predictions, references=references)
>>> print(list(results.keys()))
['rouge1', 'rouge2', 'rougeL', 'rougeLsum']
>>> print(results["rouge1"])
AggregateScore(low=Score(precision=1.0, recall=1.0, fmeasure=1.0),
mid=Score(precision=1.0, recall=1.0, fmeasure=1.0), high=Score(precision=1.0,
recall=1.0, fmeasure=1.0))
>>> print(results["rouge1"].mid.fmeasure)
1.0
""", stored examples: 0)
```

#Example of how the metrics will be computed

```
fake_preds = ["hello there", "general kenobi"]
```

```

fake_labels = ["hello there", "general kenobi"]
metric.compute(predictions=fake_preds, references=fake_labels)

{'rouge1': AggregateScore(low=Score(precision=1.0, recall=1.0, fmeasure=1.0),
mid=Score(precision=1.0, recall=1.0, fmeasure=1.0), high=Score(precision=1.0,
recall=1.0, fmeasure=1.0)),
'rouge2': AggregateScore(low=Score(precision=1.0, recall=1.0, fmeasure=1.0),
mid=Score(precision=1.0, recall=1.0, fmeasure=1.0), high=Score(precision=1.0,
recall=1.0, fmeasure=1.0)),
'rougeL': AggregateScore(low=Score(precision=1.0, recall=1.0, fmeasure=1.0),
mid=Score(precision=1.0, recall=1.0, fmeasure=1.0), high=Score(precision=1.0,
recall=1.0, fmeasure=1.0)),
'rougeLsum': AggregateScore(low=Score(precision=1.0, recall=1.0, fmeasure=1.0),
mid=Score(precision=1.0, recall=1.0, fmeasure=1.0), high=Score(precision=1.0,
recall=1.0, fmeasure=1.0))}

```

```
from transformers import AutoTokenizer
```

```
tokenizer = AutoTokenizer.from_pretrained(model_checkpoint)
```

```

Downloading: 100% 1.20k/1.20k [00:00<00:00, 42.4kB/s]
Downloading: 100% 792k/792k [00:00<00:00, 4.88MB/s]
Downloading: 100% 1.39M/1.39M [00:00<00:00, 4.36MB/s]
/usr/local/lib/python3.7/dist-packages/transformers/models/t5/tokenization_t5_fa
For now, this behavior is kept to avoid breaking backwards compatibility when pa
- Be aware that you SHOULD NOT rely on t5-small automatically truncating your in
- If you want to encode/pad to sequences longer than 512 you can either instanti
- To avoid this warning, please instantiate this tokenizer with `model_max_length
FutureWarning,

```

```
#Example of how the sentence in the dataset will be tokenized
```

```
tokenizer("Hello, this one sentence!")
```

```

{'input_ids': [8774, 6, 48, 80, 7142, 55, 1], 'attention_mask': [1, 1, 1, 1, 1,
1, 1]}

```

```

if model_checkpoint in ["t5-small", "t5-base", "t5-larg", "t5-3b", "t5-11b"]:
    prefix = "summarize: "
else:
    prefix = ""

```

```
#Preparing the text before feeding it ot the tokenizer
```

```

max_input_length = 512
max_target_length = 128

```



```
def preprocess_function(examples):
    inputs = [prefix + doc for doc in examples["article"]]
    model_inputs = tokenizer(inputs, max_length=max_input_length, truncation=True)

    # Setup the tokenizer for targets
    with tokenizer.as_target_tokenizer():
        labels = tokenizer(examples["highlights"], max_length=max_target_length, trunc

    model_inputs["labels"] = labels["input_ids"]
    return model_inputs
```

```
preprocess_function(raw_datasets['train'][:2])
```

```
/usr/local/lib/python3.7/dist-packages/transformers/tokenization_utils_base.py:311:
`as_target_tokenizer` is deprecated and will be removed in v5 of Transformers
{'input_ids': [[21603, 10, 301, 24796, 4170, 6, 2789, 41, 18844, 61, 1636, 8929,
16023, 2213, 4173, 6324, 12591, 15, 11391, 592, 12, 3, 9, 2196, 3996, 1755, 770,
8785, 591, 11039, 770, 61, 13462, 38, 3, 88, 5050, 507, 30, 2089, 6, 68, 3, 88,
10419, 7, 8, 540, 751, 31, 17, 4061, 3, 9, 10783, 30, 376, 5, 4173, 6324, 12591,
15, 38, 8929, 16023, 16, 96, 15537, 651, 16023, 11, 8, 5197, 13, 8, 12308, 121,
304, 8, 19142, 13, 29517, 6710, 343, 7, 300, 8, 296, 6, 8, 1021, 7556, 845, 3,
88, 65, 150, 1390, 12, 9030, 17, 449, 112, 1723, 550, 30, 1006, 2948, 6, 3281,
11, 17086, 2251, 5, 96, 196, 278, 31, 17, 515, 12, 36, 80, 13, 273, 151, 113, 6,
38, 1116, 38, 79, 919, 14985, 8247, 805, 1452, 3, 9, 3805, 2100, 443, 1232, 42,
424, 1126, 976, 3, 88, 1219, 46, 3746, 2772, 49, 2283, 48, 847, 5, 96, 196, 278,
31, 17, 317, 27, 31, 195, 36, 1989, 28887, 5, 96, 634, 378, 27, 114, 2611, 33,
378, 24, 583, 81, 335, 7051, 1636, 1335, 11, 3190, 7, 11, 5677, 7, 535, 486,
14985, 6324, 12591, 15, 56, 36, 3, 179, 12, 24068, 16, 3, 9, 2653, 6, 805, 3, 9,
3281, 16, 3, 9, 11943, 42, 217, 8, 12082, 814, 96, 4489, 7, 1625, 10, 2733,
2466, 976, 1083, 1296, 1747, 666, 112, 381, 80, 1974, 30, 8, 1270, 1367, 828,
5059, 5, 9487, 13, 149, 3, 88, 31, 195, 3946, 112, 15754, 3591, 33, 365, 6215,
7, 5, 978, 3102, 11, 452, 343, 141, 150, 1670, 30, 112, 1390, 5, 96, 196, 31,
195, 1728, 43, 128, 1843, 13, 1088, 976, 3, 88, 243, 16, 46, 2772, 5, 96, 12599,
5839, 13, 25, 56, 36, 1183, 81, 34, 535, 6324, 12591, 15, 31, 7, 8783, 45, 8,
166, 874, 16023, 4852, 43, 118, 1213, 16, 3, 9, 2019, 3069, 84, 3, 88, 65, 59,
118, 3, 179, 12, 1586, 5, 3, 4868, 112, 1710, 10393, 11, 20816, 6, 8, 7556, 845,
3, 88, 19, 2627, 112, 1922, 3, 16804, 30, 8, 1591, 5, 96, 24337, 33, 373, 479,
12, 497, 3, 31, 2168, 26, 2213, 1550, 326, 8, 6579, 7, 6, 31, 121, 3, 88, 1219,
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```

```

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```

```
tokenized_datasets = raw_datasets.map(preprocess_function, batched=True)
```

```
100% 288/288 [03:25<00:00, 1.67ba/s]
```

```
100% 14/14 [00:09<00:00, 1.61ba/s]
```

```
100% 12/12 [00:08<00:00, 1.51ba/s]
```

```

from transformers import AutoModelForSeq2SeqLM, DataCollatorForSeq2Seq, Seq2SeqTrainingArguments

model = AutoModelForSeq2SeqLM.from_pretrained(model_checkpoint)

```

```
Downloading: 100%
```

```
242M/242M [00:04<00:00, 61.7MB/s]
```

```
#Hyper-parameters used for training the model
```

```

batch_size = 12
model_name = model_checkpoint.split("/")[-1]
args = Seq2SeqTrainingArguments(
    f"{model_name}-finetuned-t5-summarization",
    evaluation_strategy = "epoch",
    learning_rate=4e-5,
    per_device_train_batch_size=batch_size,
    per_device_eval_batch_size=batch_size,
    weight_decay=0.01,
    save_total_limit=3,
    num_train_epochs=6,
    predict_with_generate=True,
    fp16=True,
    push_to_hub=True,
)

```

```

data_collator = DataCollatorForSeq2Seq(tokenizer, model=model)

import nltk

import numpy as np

def compute_metrics(eval_pred):
    predictions, labels = eval_pred
    decoded_preds = tokenizer.batch_decode(predictions, skip_special_tokens=True)
    # Replace -100 in the labels as we can't decode them.
    labels = np.where(labels != -100, labels, tokenizer.pad_token_id)
    decoded_labels = tokenizer.batch_decode(labels, skip_special_tokens=True)

    # Rouge expects a newline after each sentence
    decoded_preds = ["\n".join(nltk.sent_tokenize(pred.strip())) for pred in decoded_preds]
    decoded_labels = ["\n".join(nltk.sent_tokenize(label.strip())) for label in decoded_labels]

    result = metric.compute(predictions=decoded_preds, references=decoded_labels, use_stemmer=True)
    # Extract a few results
    result = {key: value.mid.fmeasure * 100 for key, value in result.items()}

    # Add mean generated length
    prediction_lens = [np.count_nonzero(pred != tokenizer.pad_token_id) for pred in predictions]
    result["gen_len"] = np.mean(prediction_lens)

    return {k: round(v, 4) for k, v in result.items()}

trainer = Seq2SeqTrainer(
    model=model,
    args=args,
    train_dataset=tokenized_datasets["train"],
    eval_dataset=tokenized_datasets["validation"],
    data_collator=data_collator,
    tokenizer=tokenizer,
    compute_metrics=compute_metrics
)

```

Cloning <https://huggingface.co/ajitjadhav/t5-small-finetuned-t5-summarization> in:  
 WARNING:huggingface\_hub.repository:Cloning <https://huggingface.co/ajitjadhav/t5->

Download file pytorch\_model.bin: 100%

231M/231M [01:31<00:1

Download file runs/Nov24\_01-37-

27\_50db25be8968/1669260824.1329968/events.out.tfevents.1669260824.50db25be8968.77.2: 100%

Download file runs/Nov24\_01-37-

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Download file runs/Nov24\_01-37-

27\_50db25be8968/1669261102.399719/events.out.tfevents.1669261102.50db25be8968.77.8: 100%

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```
nlTK.download('punkt')
```

```
[nlTK_data] Downloading package punkt to /root/nltk_data...
[nltk_data] Unzipping tokenizers/punkt.zip.
True
```

```
#Training the model
```

```
trainer.train()
```

The following columns in the training set don't have a corresponding argument in `usr/local/lib/python3.7/dist-packages/transformers/optimization.py:310: FutureWarning,

FutureWarning,

\*\*\*\* Running training \*\*\*\*

Num examples = 287113

Num Epochs = 6


Instantaneous batch size per device = 16

Total train batch size (w. parallel, distributed & accumulation) = 16

Gradient Accumulation steps = 1

Total optimization steps = 107670

Number of trainable parameters = 60506624

You're using a T5TokenizerFast tokenizer. Please note that with a fast tokenizer,  [ 53836/107670 1:49:50 < 1:49:50, 8.17 it/s, Epoch 3/6]

Epoch	Training Loss	Validation Loss	Rouge1	Rouge2	RougeL	RougeLsum	Gen
1	1.989100	1.798088	24.382000	11.709900	20.170700	23.002100	18.9
2	1.952700	1.781631	24.488400	11.767300	20.269800	23.123300	19.0

 [223/836 00:59 < 02:44, 3.73 it/s]

Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-500

Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-500/config.json

Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-500/pytorch\_model.bin

Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-500/tokenizer\_config.json

Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-500/special\_tokens\_map.json

Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-1000

Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-1000/config.json

Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-1000/pytorch\_model.bin

Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-1000/tokenizer\_config.json

Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-1000/special\_tokens\_map.json

Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-1500

Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-1500/config.json

Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-1500/pytorch\_model.bin

Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-1500/tokenizer\_config.json

Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-1500/special\_tokens\_map.json

Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-2000

Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-2000/config.json

Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-2000/pytorch\_model.bin

Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-2000/tokenizer\_config.json

Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-2000/special\_tokens\_map.json

Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-500] due to args.delete\_old\_checkpoint

Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-2500

Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-2500/config.json

Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-2500/pytorch\_model.bin

Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-2500/tokenizer\_config.json

Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-2500/special\_tokens\_map.json

Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-1000] due to args.delete\_old\_checkpoint

Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-3000

Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-3000/config.json

Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-3000/pytorch\_model.bin

Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-3000/tokenizer\_config.json

Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-3000/special\_tokens\_map.json

Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-1500] due to args.delete\_old\_checkpoint

Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-3500

```

Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-3500/config.
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-3500/pytorch
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special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-3500/
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Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-4000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-4000/config.
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-4000/pytorch
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special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-4000/
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-2500] due
Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-4500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-4500/config.
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-4500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-4500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-4500/
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-3000] due
Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-5000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-5000/config.
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-5000/pytorch
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special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-5000/
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-3500] due
Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-5500
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Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-5500/pytorch
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special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-5500/
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special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-6000/
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Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-6500
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Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-6500/pytorch
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special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-6500/
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-5000] due
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tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-7000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-7000/
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-5500] due
Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-7500
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special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-7500/
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Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-8000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-8000/config.
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-8000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-8000/

```

```

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deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-6500] d
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model weights saved in t5-small-finetuned-t5-summarization/checkpoint-8500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-8500/
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deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-7000] d
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-9000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-9000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-9000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-9000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-9000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-7500] d
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configuration saved in t5-small-finetuned-t5-summarization/checkpoint-9500/config
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tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-9500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-9500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-8000] d
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tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-10000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-10000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-8500] d
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model weights saved in t5-small-finetuned-t5-summarization/checkpoint-10500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-10500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-10500/
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saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-11000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-11000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-11000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-11000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-11000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-9500] d
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-11500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-11500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-11500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-11500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-11500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-10000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-12000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-12000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-12000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-12000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-12000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-10500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-12500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-12500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-12500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-12500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-12500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-11000] c

```

<https://colab.research.google.com/drive/18wqjzek8ui9vwuLtHk7CsIH6vFd7Y7Af?authuser=1#scrollTo=hkARWRXbkHNf&printMode=true>



```

model weights saved in t5-small-finetuned-t5-summarization/checkpoint-17500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-17500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-17500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-16000] c
The following columns in the evaluation set don't have a corresponding argument in
**** Running Evaluation ****

```

```

    Num examples = 13368

```

```

    Batch size = 16

```

```

saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-18000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-18000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-18000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-18000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-18000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-16500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-18500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-18500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-18500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-18500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-18500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-17000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-19000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-19000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-19000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-19000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-19000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-17500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-19500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-19500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-19500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-19500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-19500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-18000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-20000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-20000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-20000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-20000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-20000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-18500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-20500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-20500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-20500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-20500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-20500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-19000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-21000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-21000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-21000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-21000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-21000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-19500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-21500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-21500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-21500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-21500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-21500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-20000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-22000

```

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configuration saved in t5-small-finetuned-t5-summarization/checkpoint-22000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-22000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-22000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-22000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-20500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-22500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-22500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-22500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-22500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-22500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-21000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-23000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-23000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-23000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-23000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-23000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-21500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-23500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-23500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-23500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-23500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-23500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-22000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-24000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-24000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-24000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-24000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-24000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-22500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-24500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-24500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-24500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-24500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-24500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-23000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-25000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-25000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-25000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-25000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-25000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-23500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-25500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-25500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-25500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-25500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-25500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-24000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-26000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-26000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-26000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-26000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-26000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-24500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-26500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-26500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-26500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-26500/

```

```

tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-26500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-26500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-25000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-27000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-27000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-27000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-27000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-27000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-25500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-27500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-27500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-27500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-27500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-27500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-26000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-28000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-28000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-28000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-28000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-28000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-26500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-28500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-28500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-28500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-28500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-28500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-27000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-29000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-29000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-29000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-29000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-29000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-27500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-29500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-29500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-29500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-29500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-29500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-28000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-30000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-30000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-30000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-30000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-30000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-28500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-30500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-30500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-30500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-30500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-30500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-29000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-31000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-31000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-31000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-31000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-31000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-29500] c

```

```

saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-31500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-31500/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-31500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-31500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-31500/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-30000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-32000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-32000/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-32000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-32000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-32000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-30500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-32500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-32500/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-32500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-32500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-32500/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-31000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-33000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-33000/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-33000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-33000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-33000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-31500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-33500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-33500/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-33500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-33500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-33500/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-32000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-34000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-34000/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-34000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-34000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-34000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-32500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-34500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-34500/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-34500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-34500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-34500/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-33000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-35000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-35000/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-35000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-35000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-35000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-33500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-35500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-35500/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-35500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-35500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-35500/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-34000]
The following columns in the evaluation set don't have a corresponding argument in the model:
**** Running Evaluation ****

```

```

num_examples = 13368

```

```
num_examples = 10000
```

```
Batch size = 16
```

```
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-36000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-36000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-36000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-36000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-36000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-34500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-36500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-36500/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-36500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-36500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-36500/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-35000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-37000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-37000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-37000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-37000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-37000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-35500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-37500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-37500/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-37500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-37500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-37500/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-36000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-38000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-38000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-38000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-38000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-38000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-36500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-38500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-38500/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-38500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-38500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-38500/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-37000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-39000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-39000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-39000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-39000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-39000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-37500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-39500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-39500/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-39500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-39500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-39500/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-38000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-40000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-40000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-40000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-40000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-40000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-38500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-40500
```

```

configuration saved in t5-small-finetuned-t5-summarization/checkpoint-40500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-40500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-40500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-40500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-39000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-41000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-41000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-41000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-41000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-41000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-39500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-41500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-41500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-41500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-41500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-41500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-40000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-42000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-42000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-42000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-42000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-42000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-40500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-42500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-42500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-42500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-42500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-42500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-41000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-43000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-43000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-43000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-43000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-43000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-41500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-43500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-43500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-43500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-43500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-43500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-42000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-44000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-44000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-44000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-44000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-44000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-42500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-44500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-44500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-44500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-44500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-44500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-43000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-45000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-45000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-45000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-45000/

```

```

tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-4500,
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-45000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-43500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-45500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-45500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-45500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-4550,
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-45500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-44000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-46000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-46000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-46000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-4600,
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-46000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-44500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-46500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-46500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-46500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-4650,
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-46500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-45000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-47000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-47000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-47000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-4700,
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-47000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-45500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-47500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-47500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-47500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-4750,
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-47500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-46000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-48000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-48000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-48000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-4800,
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-48000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-46500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-48500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-48500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-48500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-4850,
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-48500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-47000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-49000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-49000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-49000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-4900,
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-49000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-47500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-49500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-49500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-49500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-4950,
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-49500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-48000] c

```



```

saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-50000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-50000/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-50000/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-50000/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-50000/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-48500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-50500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-50500/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-50500/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-50500/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-50500/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-49000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-51000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-51000/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-51000/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-51000/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-51000/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-49500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-51500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-51500/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-51500/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-51500/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-51500/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-50000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-52000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-52000/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-52000/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-52000/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-52000/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-50500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-52500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-52500/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-52500/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-52500/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-52500/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-51000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-53000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-53000/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-53000/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-53000/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-53000/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-51500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-53500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-53500/config
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-53500/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-53500/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-53500/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-52000]
The following columns in the evaluation set don't have a corresponding argument in the model:
**** Running Evaluation ****
Num examples = 13368
Batch size = 16

```

[107670/107670 3:47:59, Epoch 6/6]

Epoch	Training Loss	Validation Loss	Rouge1	Rouge2	RougeL	RougeLsum	Gen
1	1.989100	1.798088	24.382000	11.709900	20.170700	23.002100	18.9



2	1.952700	1.781631	24.488400	11.767300	20.269800	23.123300	19.0
3	1.942100	1.772838	24.578200	11.840100	20.334300	23.203300	18.9
4	1.929800	1.767682	24.566000	11.872300	20.329600	23.194300	18.9
5	1.925600	1.761927	24.566200	11.838500	20.326500	23.201600	18.9
6	1.905600	1.761284	24.575500	11.842400	20.303100	23.186700	18.9

```

saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-54000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-54000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-54000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-54000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-54000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-52500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-54500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-54500/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-54500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-54500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-54500/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-53000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-55000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-55000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-55000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-55000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-55000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-53500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-55500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-55500/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-55500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-55500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-55500/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-54000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-56000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-56000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-56000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-56000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-56000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-54500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-56500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-56500/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-56500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-56500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-56500/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-55000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-57000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-57000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-57000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-57000/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-57000/special_tokens_map.json
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-55500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-57500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-57500/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-57500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-57500/tokenizer_config.json
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-57500/special_tokens_map.json

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```

deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-56000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-58000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-58000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-58000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-58000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-58000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-56500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-58500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-58500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-58500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-58500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-58500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-57000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-59000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-59000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-59000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-59000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-59000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-57500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-59500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-59500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-59500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-59500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-59500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-58000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-60000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-60000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-60000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-60000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-60000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-58500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-60500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-60500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-60500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-60500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-60500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-59000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-61000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-61000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-61000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-61000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-61000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-59500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-61500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-61500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-61500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-61500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-61500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-60000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-62000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-62000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-62000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-62000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-62000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-60500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-62500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-62500/config

```



```

special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-67000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-65500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-67500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-67500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-67500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-6750
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-67500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-66000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-68000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-68000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-68000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-6800
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-68000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-66500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-68500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-68500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-68500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-6850
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-68500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-67000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-69000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-69000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-69000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-6900
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-69000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-67500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-69500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-69500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-69500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-6950
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-69500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-68000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-70000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-70000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-70000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-7000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-70000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-68500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-70500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-70500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-70500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-7050
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-70500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-69000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-71000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-71000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-71000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-7100
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-71000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-69500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-71500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-71500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-71500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-7150
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-71500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-70000] c
The following columns in the evaluation set don't have a corresponding argument in

```

the following columns in the evaluation set don't have a corresponding argument in

\*\*\*\* Running Evaluation \*\*\*\*

Num examples = 13368

Batch size = 16

```

Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-72000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-72000/config.json
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-72000/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-72000/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-72000/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-70500]
Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-72500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-72500/config.json
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-72500/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-72500/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-72500/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-71000]
Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-73000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-73000/config.json
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-73000/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-73000/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-73000/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-71500]
Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-73500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-73500/config.json
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-73500/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-73500/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-73500/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-72000]
Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-74000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-74000/config.json
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-74000/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-74000/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-74000/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-72500]
Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-74500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-74500/config.json
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-74500/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-74500/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-74500/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-73000]
Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-75000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-75000/config.json
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-75000/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-75000/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-75000/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-73500]
Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-75500
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-75500/config.json
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-75500/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-75500/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-75500/special_tokens_map.json
Deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-74000]
Saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-76000
Configuration saved in t5-small-finetuned-t5-summarization/checkpoint-76000/config.json
Model weights saved in t5-small-finetuned-t5-summarization/checkpoint-76000/pytorch_model.bin
Tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-76000/tokenizer_config.json
Special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-76000/special_tokens_map.json

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deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-74500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-76500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-76500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-76500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-76500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-76500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-75000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-77000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-77000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-77000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-77000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-77000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-75500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-77500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-77500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-77500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-77500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-77500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-76000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-78000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-78000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-78000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-78000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-78000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-76500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-78500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-78500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-78500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-78500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-78500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-77000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-79000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-79000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-79000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-79000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-79000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-77500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-79500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-79500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-79500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-79500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-79500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-78000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-80000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-80000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-80000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-80000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-80000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-78500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-80500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-80500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-80500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-80500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-80500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-79000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-81000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-81000/config

```

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configuration saved in t5-small-finetuned-t5-summarization/checkpoint-79500/conda
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-81000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-81000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-81000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-79500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-81500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-81500/conda
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-81500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-81500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-81500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-80000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-82000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-82000/conda
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-82000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-82000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-82000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-80500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-82500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-82500/conda
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-82500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-82500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-82500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-81000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-83000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-83000/conda
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-83000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-83000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-83000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-81500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-83500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-83500/conda
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-83500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-83500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-83500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-82000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-84000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-84000/conda
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-84000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-84000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-84000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-82500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-84500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-84500/conda
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-84500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-84500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-84500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-83000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-85000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-85000/conda
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-85000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-85000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-85000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-83500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-85500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-85500/conda
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-85500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-85500

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```

special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-85500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-84000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-86000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-86000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-86000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-8600
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-86000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-84500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-86500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-86500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-86500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-8650
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-86500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-85000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-87000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-87000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-87000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-8700
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-87000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-85500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-87500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-87500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-87500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-8750
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-87500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-86000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-88000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-88000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-88000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-8800
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-88000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-86500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-88500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-88500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-88500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-8850
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-88500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-87000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-89000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-89000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-89000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-8900
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-89000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-87500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-89500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-89500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-89500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-8950
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-89500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-88000] c
The following columns in the evaluation set don't have a corresponding argument in
**** Running Evaluation ****
Num examples = 13368
Batch size = 16
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-90000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-90000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-90000/pytorch

```



```

model weights saved in t5-small-finetuned-t5-summarization/checkpoint-90000/
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-90000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-90000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-88500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-90500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-90500/
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-90500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-90500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-90500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-89000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-91000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-91000/
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-91000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-91000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-91000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-89500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-91500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-91500/
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-91500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-91500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-91500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-90000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-92000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-92000/
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-92000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-92000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-92000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-90500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-92500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-92500/
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-92500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-92500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-92500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-91000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-93000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-93000/
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-93000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-93000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-93000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-91500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-93500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-93500/
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-93500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-93500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-93500/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-92000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-94000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-94000/
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-94000/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-94000/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-94000/
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-92500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-94500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-94500/
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-94500/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-94500/
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-94500/

```

```

deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-93000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-95000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-95000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-95000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-9500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-95000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-93500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-95500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-95500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-95500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-9550
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-95500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-94000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-96000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-96000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-96000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-9600
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-96000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-94500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-96500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-96500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-96500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-9650
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-96500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-95000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-97000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-97000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-97000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-9700
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-97000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-95500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-97500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-97500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-97500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-9750
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-97500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-96000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-98000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-98000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-98000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-9800
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-98000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-96500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-98500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-98500/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-98500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-9850
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-98500,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-97000] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-99000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-99000/config
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-99000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-9900
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-99000,
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-97500] c
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-99500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-99500/config

```

```

model weights saved in t5-small-finetuned-t5-summarization/checkpoint-99500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-99500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-99500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-98000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-100000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-100000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-100000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-100000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-100000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-98500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-100500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-100500/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-100500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-100500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-100500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-99000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-101000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-101000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-101000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-101000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-101000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-99500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-101500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-101500/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-101500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-101500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-101500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-100000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-102000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-102000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-102000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-102000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-102000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-100500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-102500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-102500/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-102500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-102500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-102500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-101000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-103000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-103000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-103000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-103000
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-103000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-101500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-103500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-103500/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-103500/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-103500
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-103500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-102000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-104000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-104000/config.json
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-104000/pytorch
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-104000

```

```

special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-104000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-102500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-104500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-104500/conf:
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-104500/pyto
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-1045
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-104500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-103000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-105000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-105000/conf:
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-105000/pyto
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-1050
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-105000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-103500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-105500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-105500/conf:
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-105500/pyto
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-1055
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-105500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-104000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-106000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-106000/conf:
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-106000/pyto
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-1060
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-106000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-104500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-106500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-106500/conf:
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-106500/pyto
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-1065
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-106500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-105000]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-107000
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-107000/conf:
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-107000/pyto
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-1070
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-107000
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-105500]
saving model checkpoint to t5-small-finetuned-t5-summarization/checkpoint-107500
configuration saved in t5-small-finetuned-t5-summarization/checkpoint-107500/conf:
model weights saved in t5-small-finetuned-t5-summarization/checkpoint-107500/pyto
tokenizer config file saved in t5-small-finetuned-t5-summarization/checkpoint-1075
special tokens file saved in t5-small-finetuned-t5-summarization/checkpoint-107500
deleting older checkpoint [t5-small-finetuned-t5-summarization/checkpoint-106000]
The following columns in the evaluation set don't have a corresponding argument in
**** Running Evaluation ****
  Num examples = 13368
  Batch size = 16

```

Training completed. Do not forget to share your model on [huggingface.co/models](https://huggingface.co/models) =)

## Saving the model on huggingface hub

- After saving the model on huggingface hub, it can be used by anyone from this link:

```
trainer.push_to_hub()
```

```
Saving model checkpoint to t5-small-finetuned-t5-summarization
Configuration saved in t5-small-finetuned-t5-summarization/config.json
Model weights saved in t5-small-finetuned-t5-summarization/pytorch_model.bin
tokenizer config file saved in t5-small-finetuned-t5-summarization/tokenizer_conf
Special tokens file saved in t5-small-finetuned-t5-summarization/special_tokens_1
Several commits (2) will be pushed upstream.
WARNING:huggingface_hub.repository:Several commits (2) will be pushed upstream.
The progress bars may be unreliable.
WARNING:huggingface_hub.repository:The progress bars may be unreliable.

Upload file pytorch_model.bin: 100%                231M/231M [03:28<00:00,

Upload file runs/Dec01_16-42-17_15788a09b431/events.out.tfevents.1669913039.15788a09b431.106.0:
100%

remote: Scanning LFS files for validity, may be slow...
remote: LFS file scan complete.
To https://huggingface.co/ajitjadhav/t5-small-finetuned-t5-summarization
804b6be..1a3afbd  main -> main

WARNING:huggingface_hub.repository:remote: Scanning LFS files for validity, may be slow...
remote: LFS file scan complete.
To https://huggingface.co/ajitjadhav/t5-small-finetuned-t5-summarization
804b6be..1a3afbd  main -> main

To https://huggingface.co/ajitjadhav/t5-small-finetuned-t5-summarization
1a3afbd..c69955f  main -> main

WARNING:huggingface_hub.repository:To https://huggingface.co/ajitjadhav/t5-small-finetuned-t5-summarization
1a3afbd..c69955f  main -> main
```

Importing our fine-tuned model from hugging face hub for summarization  
 ( <https://huggingface.co/ajitjadhav/t5-small-finetuned-t5-summarization> )

```
!pip install -qq torch
```

```
!pip install -qq sentencepiece
```

```
pip install transformers -q
```

```
from transformers import AutoTokenizer, AutoModelForSeq2SeqLM
```

```
tokenizer = AutoTokenizer.from_pretrained("ajitjadhav/t5-small-finetuned-t5-summarization")
```

```
model = AutoModelForSeq2SeqLM.from_pretrained("ajitjadhav/t5-small-finetuned-t5-summarization")
```

```
import torch
import json
device = torch.device('cpu')
```

```
text =""" The US has "passed the peak" on new coronavirus cases, President Donald Tru
The US has over 637,000 confirmed Covid-19 cases and over 30,826 deaths, the highest
At the daily White House coronavirus briefing on Wednesday, Trump said new guidelines
"We'll be the comeback kids, all of us," he said. "We want to get our country back."
The Trump administration has previously fixed May 1 as a possible date to reopen the v
```

```
preprocess_text = text.strip().replace("\n","")
t5_prepared_Text = "summarize: "+preprocess_text
print ("original text preprocessed: \n", preprocess_text)
```

```
tokenized_text = tokenizer.encode(t5_prepared_Text, return_tensors="pt").to(device)
```

```
# summarize
summary_ids = model.generate(tokenized_text,
                             num_beams=4,
                             no_repeat_ngram_size=2,
                             min_length=30,
                             max_length=100,
                             early_stopping=True)
```

```
output = tokenizer.decode(summary_ids[0], skip_special_tokens=True)
```

```
print ("\n\nSummarized text: \n",output)
```

```
ident Donald Trump said and predicted that some states would reopen this month.Th
```

```
s month. The US has over 637,000 confirmed Covid-19 cases and over 30,826 deaths,
```

## Calculating Flesch score of the complete and summarized text

```
!pip install textstat
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/packages
Requirement already satisfied: textstat in /usr/local/lib/python3.7/dist-packages
Requirement already satisfied: pyphen in /usr/local/lib/python3.7/dist-packages
```

```
import numpy as np
from pandas import DataFrame
import textstat
```

```
complete_text=""" The US has "passed the peak" on new coronavirus cases, President Dor  
The US has over 637,000 confirmed Covid-19 cases and over 30,826 deaths, the highest 1  
At the daily White House coronavirus briefing on Wednesday, Trump said new guidelines  
"We'll be the comeback kids, all of us," he said. "We want to get our country back."  
The Trump administration has previously fixed May 1 as a possible date to reopen the v
```

```
complete_text=str(complete_text)
```

```
print(textstat.flesch_reading_ease(complete_text))  
print(textstat.reading_time(complete_text, ms_per_char=70))
```

```
67.89  
40.95
```

```
summarized_text="President Donald Trump predicts some states will reopen this month. 7  
summarized_text=str(summarized_text)
```

```
print(textstat.flesch_reading_ease(summarized_text))  
print(textstat.reading_time(summarized_text, ms_per_char=70))
```

```
81.63  
10.71
```

From the above Flesch score, we can see that our model provides users with an easy to comprehend summary and also reduces reading time.

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✓ 0s completed at 12:25 PM

