New issue

Pre-train Data Structure #37

Closed

saifulislam79 opened last month · edited by saifulislam79 Edits

Thank you for sharing great work, I want to know about pre-train data format and it meaning given config file

```
> `
> # Datasets
> text_QA_dataset: <speech input-ids>
> TTS_dataset: <text-input-ids>
```

Basically i want to know how can i prepare `text_QA_dataset` and `TTS_dataset` and it's format structure. i am waiting for your response and great-full to you.

What is the different between `text_QA_dataset` and `TTS_dataset` .

amuvarma13 last month · edited by amuvarma13 Edits Collaborator

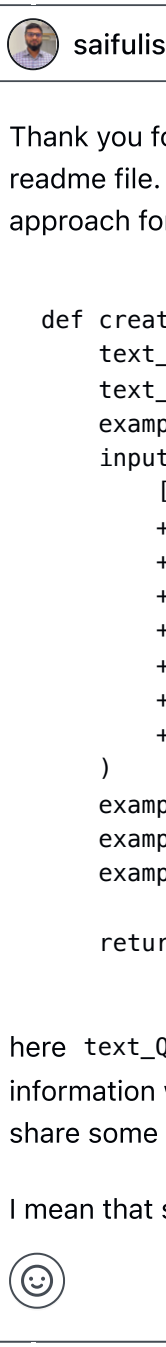
```python
tokeniser_length = 128256
start_of_text = 128000
end_of_text = 128009

start_of_speech = tokeniser_length + 1
end_of_speech = tokeniser_length + 2

start_of_human = tokeniser_length + 3
end_of_human = tokeniser_length + 4

start_of_ai = tokeniser_length + 5
end_of_ai =  tokeniser_length + 6
pad_token = tokeniser_length + 7

audio_tokens_start = tokeniser_length + 10
```

start of human --- start of text --- text tokens --- end of text--- end of human--- start of ai --- start of speech --- speech tokens --- end of speech --- end of ai

Let me know if unclear or further questions.

EDIT - for text which I realise you also asked about:

start of human --- start of text --- question text tokens --- end of text--- end of human --- start of ai --- start of text --- answer text tokens --- end of text --- end of ai



saifulislam79 last month · edited by saifulislam79 Edits Author

Thank you for your reply i had reviewed data processing code into colab, which mentioned into readme file. I need more clear understanding the processing approach, Is it same processing approach for both fine-tune and pre-train .

```
def create_input_ids(example):
    text_ids = tokenizer.encode(example["text"],  add_special_tokens=True)
    text_ids.append(end_of_text)
    example["text_tokens"] = text_ids
    input_ids = (
        [start_of_human]
        + example["text_tokens"]
        + [end_of_human]
        + [start_of_ai]
        + [start_of_speech]
        + example["codes_list"]
        + [end_of_speech]
        + [end_of_ai]
    )
    example["input_ids"] = input_ids
    example["labels"] = input_ids
    example["attention_mask"] = [1] * len(input_ids)

    return example
```

here `text_QA_dataset` and `TTS_dataset` why mentions separately. `text_QA_dataset` is QA textual information with audio or `TTS_dataset` is as normal TTS dataset. it will more convenient , if possible share some data sample about `text_QA_dataset` and `TTS_dataset` format.

I mean that same format as like fine-tune dataset but use different dataset or other.

amuvarma13 last month · edited by amuvarma13 Edits Collaborator

Yep the `text_QA_dataset` is only text no audio. `tts_dataset` is text and then a spoken version of the text.

Here is what a text sample could look like, all the text samples are chained together so all input_ids are the same length (8192) for pretraining to make the training as efficient as possible:

start of human --- start of text --- question text tokens (i.e. AutoTokeniser.tokenise("What is 2 +2?") --- end of text--- end of human --- start of ai --- start of text --- (i.e. AutoTokeniser.tokenise("Great question, 2 + 2 =4") --- end of text --- end of ai

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amuvarma13 last month Collaborator

Feel free to close this issue - if your question is answered!

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saifulislam79 last month · edited by saifulislam79 Edits Author

This is the last clarification
Example with Token IDs (simplified illustration)
Assume the tokenizer produces the following (again, just for illustration):
input sentence 1 : What is 2 + 2? ----> audio1.mp3

Answer other sentence : Great question, 2 + 2 = 4. ---> audio2.mp3

```
"start of human" → [101]
"start of text" → [102]
"What is 2 + 2?" → [2001, 2002, 2003, 2004, 2005]
"end of text" → [103]
"end of human" → [104]
"start of ai" → [105]
"start of text" → [102]
"Great question, 2 + 2 = 4." → [3001, 3002, 3003, 3004, 3005, 3006]
"end of text" → [103]
"end of ai" → [106]
```

Chained together example of question and answer:

```
[101, 102, 2001, 2002, 2003, 2004, 2005, 103, 104, 105, 102, 3001, 3002, 3003, 3004, 3005, 3006, 103, 106]
```

if i have 1M text sentences and it's corresponding audio codes, what will be `<speech input-ids>` and `<text-input-ids>` . Could you please give a example .

saiful9379 last month

@amuvarma13 thank for your clarification.

amuvarma13 last month Collaborator

Sure,
Text input ids (text dataset) is for text question text answer pairs - the format you have given above is correct.
Speech input ids i.e. the tts dataset is for text speech pairs no question answering - the format I gave above with start of speech etc is what you want for this,.

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amuvarma13 last month Collaborator

Marking as solved - reopen if unclear.

amuvarma13 closed this as completed last month

amuvarma13 mentioned this 3 weeks ago
Pre-training datasets samples #20

amuvarma13 mentioned this 2 weeks ago
Datasets for build model pretrained #80

Sundragon1993 3 days ago

@amuvarma13 @saiful9379 Would it be possible to share the preparation code for the text_QA_dataset, perhaps by adapting the TTS preparation code?

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