ConversationTokenBufferMemory

Contents

`ConversationTokenBufferMemory` keeps a buffer of recent interactions in memory, and uses token length rather than number of interactions to determine when to flush interactions.

Let's first walk through how to use the utilities

```
from langchain.memory import ConversationTokenBufferMemory
from langchain.llms import OpenAI
llm = OpenAI()
```

```
memory = ConversationTokenBufferMemory(llm=llm, max_token_limit=10)
memory.save_context({"input": "hi"}, {"ouput": "whats up"})
memory.save_context({"input": "not much you"}, {"ouput": "not much"})
```

```
memory.load_memory_variables({})
```

```
{'history': 'Human: not much you\nAI: not much'}
```

We can also get the history as a list of messages (this is useful if you are using this with a chat model).

```
memory = ConversationTokenBufferMemory(llm=llm, max_token_limit=10,
return_messages=True)
memory.save_context({"input": "hi"}, {"ouput": "whats up"})
memory.save_context({"input": "not much you"}, {"ouput": "not much"})
```

Using in a chain

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```
from langchain.chains import ConversationChain
conversation_with_summary = ConversationChain(
    llm=llm,
    # We set a very low max_token_limit for the purposes of testing.
    memory=ConversationTokenBufferMemory(llm=OpenAI(), max_token_limit=60),
    verbose=True
)
conversation_with_summary.predict(input="Hi, what's up?")
```

```
> Entering new ConversationChain chain...
Prompt after formatting:
The following is a friendly conversation between a human and an AI. The AI is
talkative and provides lots of specific details from its context. If the AI does not
know the answer to a question, it truthfully says it does not know.

Current conversation:

Human: Hi, what's up?
AI:

> Finished chain.
```

```
" Hi there! I'm doing great, just enjoying the day. How about you?"
```

```
conversation_with_summary.predict(input="Just working on writing some documentation!")
```

```
> Entering new ConversationChain chain...
Prompt after formatting:
The following is a friendly conversation between a human and an AI. The AI is
talkative and provides lots of specific details from its context. If the AI does not
know the answer to a question, it truthfully says it does not know.

Current conversation:
Human: Hi, what's up?
AI:  Hi there! I'm doing great, just enjoying the day. How about you?
Human: Just working on writing some documentation!
AI:

> Finished chain.
```

```
' Sounds like a productive day! What kind of documentation are you writing?'
```

```
conversation_with_summary.predict(input="For LangChain! Have you heard of it?")
```

Skip to main content

```
> Entering new ConversationChain chain...
Prompt after formatting:
The following is a friendly conversation between a human and an AI. The AI is talkative and provides lots of specific details from its context. If the AI does not know the answer to a question, it truthfully says it does not know.

Current conversation:
Human: Hi, what's up?
AI:  Hi there! I'm doing great, just enjoying the day. How about you?
Human: Just working on writing some documentation!
AI:  Sounds like a productive day! What kind of documentation are you writing?
Human: For LangChain! Have you heard of it?
AI:

> Finished chain.
```

```
" Yes, I have heard of LangChain! It is a decentralized language-learning platform that connects native speakers and learners in real time. Is that the documentation you're writing about?"
```

```
# We can see here that the buffer is updated
conversation_with_summary.predict(input="Haha nope, although a lot of people confuse it for that")
```

```
> Entering new ConversationChain chain...
Prompt after formatting:
The following is a friendly conversation between a human and an AI. The AI is talkative and provides lots of specific details from its context. If the AI does not know the answer to a question, it truthfully says it does not know.

Current conversation:
Human: For LangChain! Have you heard of it?
AI:  Yes, I have heard of LangChain! It is a decentralized language-learning platform that connects native speakers and learners in real time. Is that the documentation you're writing about?
Human: Haha nope, although a lot of people confuse it for that
AI:

> Finished chain.
```

```
" Oh, I see. Is there another language learning platform you're referring to?"
```