🏠   Modules   Agents   Agent types   Conversational

Conversational

This walkthrough demonstrates how to use an agent optimized for conversation. Other agents are often optimized for using tools to figure out the best response, which is not ideal in a conversational setting where you may want the agent to be able to chat with the user as well.

This is accomplished with a specific type of agent (`conversational-react-description`) which expects to be used with a memory component.

```python
from langchain.agents import Tool
from langchain.agents import AgentType
from langchain.memory import ConversationBufferMemory
from langchain import OpenAI
from langchain.utilities import SerpAPIWrapper
from langchain.agents import initialize_agent
```

```python
search = SerpAPIWrapper()
tools = [
    Tool(
        name = "Current Search",
        func=search.run,
        description="useful for when you need to answer questions about current events or the current state of the world"
    ),
]
```

```python
memory = ConversationBufferMemory(memory_key="chat_history")
```

```python
llm=OpenAI(temperature=0)
agent_chain = initialize_agent(tools, llm,
agent=AgentType.CONVERSATIONAL_REACT_DESCRIPTION, verbose=True,
memory=memory)
```

```python
agent_chain.run(input="hi, i am bob")
```

```
> Entering new AgentExecutor chain...

Thought: Do I need to use a tool? No
AI: Hi Bob, nice to meet you! How can I help you today?

> Finished chain.


'Hi Bob, nice to meet you! How can I help you today?'
```

```python
agent_chain.run(input="what's my name?")
```

```
> Entering new AgentExecutor chain...

Thought: Do I need to use a tool? No
AI: Your name is Bob!

> Finished chain.


'Your name is Bob!'
```

```python
agent_chain.run("what are some good dinners to make this week, if i
like thai food?")
```

```
> Entering new AgentExecutor chain...

Thought: Do I need to use a tool? Yes
Action: Current Search
Action Input: Thai food dinner recipes
Observation: 59 easy Thai recipes for any night of the week ·
Marion Grasby's Thai spicy chilli and basil fried rice · Thai curry
noodle soup · Marion Grasby's Thai Spicy ...
Thought: Do I need to use a tool? No
AI: Here are some great Thai dinner recipes you can try this week:
Marion Grasby's Thai Spicy Chilli and Basil Fried Rice, Thai Curry
Noodle Soup, Thai Green Curry with Coconut Rice, Thai Red Curry with
Vegetables, and Thai Coconut Soup. I hope you enjoy them!

> Finished chain.
```

"Here are some great Thai dinner recipes you can try this week: Marion Grasby's Thai Spicy Chilli and Basil Fried Rice, Thai Curry Noodle Soup, Thai Green Curry with Coconut Rice, Thai Red Curry with Vegetables, and Thai Coconut Soup. I hope you enjoy them!"

```
agent_chain.run(input="tell me the last letter in my name, and also
tell me who won the world cup in 1978?")
```

```
> Entering new AgentExecutor chain...

Thought: Do I need to use a tool? Yes
Action: Current Search
Action Input: Who won the World Cup in 1978
Observation: Argentina national football team
Thought: Do I need to use a tool? No
AI: The last letter in your name is "b" and the winner of the 1978
World Cup was the Argentina national football team.

> Finished chain.


'The last letter in your name is "b" and the winner of the 1978
World Cup was the Argentina national football team.'
```

```
agent_chain.run(input="whats the current temperature in pomfret?")
```

```
> Entering new AgentExecutor chain...

Thought: Do I need to use a tool? Yes
Action: Current Search
Action Input: Current temperature in Pomfret
Observation: Partly cloudy skies. High around 70F. Winds W at 5 to
10 mph. Humidity41%.
Thought: Do I need to use a tool? No
AI: The current temperature in Pomfret is around 70F with partly
cloudy skies and winds W at 5 to 10 mph. The humidity is 41%.

> Finished chain.


'The current temperature in Pomfret is around 70F with partly
cloudy skies and winds W at 5 to 10 mph. The humidity is 41%.'
```

Using a chat model

The `chat-conversational-react-description` agent type lets us create a conversational agent using a chat model instead of an LLM.

```python
from langchain.memory import ConversationBufferMemory
from langchain.chat_models import ChatOpenAI

memory = ConversationBufferMemory(memory_key="chat_history",
return_messages=True)
llm = ChatOpenAI(openai_api_key=OPENAI_API_KEY, temperature=0)
agent_chain = initialize_agent(tools, llm,
agent=AgentType.CHAT_CONVERSATIONAL_REACT_DESCRIPTION, verbose=True,
memory=memory)
```

```python
agent_chain.run(input="hi, i am bob")
```

```
    > Entering new AgentExecutor chain...
    {
        "action": "Final Answer",
        "action_input": "Hello Bob! How can I assist you today?"
    }

    > Finished chain.


    'Hello Bob! How can I assist you today?'
```

```python
agent_chain.run(input="what's my name?")
```

```
    > Entering new AgentExecutor chain...
    {
        "action": "Final Answer",
        "action_input": "Your name is Bob."
    }

    > Finished chain.
```

```
    'Your name is Bob.'
```

```python
agent_chain.run("what are some good dinners to make this week, if i
like thai food?")
```

```
    > Entering new AgentExecutor chain...
    {
        "action": "Current Search",
        "action_input": "Thai food dinner recipes"
    }
    Observation: 64 easy Thai recipes for any night of the week · Thai
curry noodle soup · Thai yellow cauliflower, snake bean and tofu curry
· Thai-spiced chicken hand pies · Thai ...
    Thought:{
        "action": "Final Answer",
        "action_input": "Here are some Thai food dinner recipes you can
try this week: Thai curry noodle soup, Thai yellow cauliflower, snake
bean and tofu curry, Thai-spiced chicken hand pies, and many more. You
can find the full list of recipes at the source I found earlier."
    }

    > Finished chain.


    'Here are some Thai food dinner recipes you can try this week: Thai
curry noodle soup, Thai yellow cauliflower, snake bean and tofu curry,
Thai-spiced chicken hand pies, and many more. You can find the full
list of recipes at the source I found earlier.'
```

```python
agent_chain.run(input="tell me the last letter in my name, and also
tell me who won the world cup in 1978?")
```

```
    > Entering new AgentExecutor chain...
    {
        "action": "Final Answer",
        "action_input": "The last letter in your name is 'b'. Argentina
won the World Cup in 1978."
    }

    > Finished chain.
```

> "The last letter in your name is 'b'. Argentina won the World Cup in 1978."

```python
agent_chain.run(input="whats the weather like in pomfret?")
```

```
> Entering new AgentExecutor chain...
{
    "action": "Current Search",
    "action_input": "weather in pomfret"
}
Observation: Cloudy with showers. Low around 55F. Winds S at 5 to 10 mph. Chance of rain 60%. Humidity76%.
Thought:{
    "action": "Final Answer",
    "action_input": "Cloudy with showers. Low around 55F. Winds S at 5 to 10 mph. Chance of rain 60%. Humidity76%."
}

> Finished chain.


'Cloudy with showers. Low around 55F. Winds S at 5 to 10 mph. Chance of rain 60%. Humidity76%.'
```