

Conversation Agent (for Chat Models)

This notebook walks through using an agent optimized for conversation, using ChatModels. 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 (`chat-conversational-react-description`) which expects to be used with a memory component.

```
import os
os.environ["LANGCHAIN_HANDLER"] = "langchain"
```

```
from langchain.agents import Tool
from langchain.memory import ConversationBufferMemory
from langchain.chat_models import ChatOpenAI
from langchain.utilities import SerpAPIWrapper
from langchain.agents import initialize_agent
```

```
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. the input to this should be a single search term."
    ),
]
```

```
memory = ConversationBufferMemory(memory_key="chat_history", return_messages=True)
```

```
llm=ChatOpenAI(temperature=0)
agent_chain = initialize_agent(tools, llm, agent="chat-conversational-react-
```

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```
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?'
```

```
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.'
```

```
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: 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 ...
Thought:{
  "action": "Final Answer",
  "action_input": "Here are some Thai food dinner recipes you can make this week: Thai spicy chilli and basil fried rice, Thai curry noodle soup, and many more. You can find 59 easy Thai recipes for any night of the week on Marion Grasby's website "
```

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> Finished chain.

"Here are some Thai food dinner recipes you can make this week: Thai spicy chilli and basil fried rice, Thai curry noodle soup, and many more. You can find 59 easy Thai recipes for any night of the week on Marion Grasby's website."

```
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...

```
```json
{
 "action": "Current Search",
 "action_input": "who won the world cup in 1978"
}
```
```

Observation: The Argentina national football team represents Argentina in men's international football and is administered by the Argentine Football Association, the governing body for football in Argentina. Nicknamed La Albiceleste, they are the reigning world champions, having won the most recent World Cup in 2022.

Thought:```json

```
{
  "action": "Final Answer",
  "action_input": "The last letter in your name is 'b'. The Argentina national football team won the World Cup in 1978."
}
```
```

> Finished chain.

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

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

> Entering new AgentExecutor chain...

```
{
 "action": "Current Search",
 "action_input": "weather in pomfret"
}
```

Observation: Mostly cloudy with gusty winds developing during the afternoon. A few clouds or even showers possible. High near 40F. Winds NW at 20 to 30 mph.

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```
"action": "Final Answer",
 "action_input": "The weather in Pomfret is mostly cloudy with gusty winds
developing during the afternoon. A few flurries or snow showers are possible. High
near 40F. Winds NNW at 20 to 30 mph."
}

> Finished chain.
```

```
'The weather in Pomfret is mostly cloudy with gusty winds developing during the
afternoon. A few flurries or snow showers are possible. High near 40F. Winds NNW
at 20 to 30 mph.'
```