

# Libraries:

```
In [1]: ! pip install -Uq langchain langchain_core langchain_community langchain-groq langchain-huggingface
```

```
_____ 1.0/1.0 MB 15.0 MB/s eta 0:00:00  
_____ 412.2/412.2 kB 16.4 MB/s eta 0:00:00  
_____ 2.5/2.5 MB 36.8 MB/s eta 0:00:00  
_____ 109.6/109.6 kB 6.2 MB/s eta 0:00:00  
_____ 50.8/50.8 kB 3.0 MB/s eta 0:00:00
```

```
In [2]: ! pip install -Uq youtube-search duckduckgo-search PyGithub
```

```
_____ 375.9/375.9 kB 8.1 MB/s eta 0:00:00  
_____ 3.3/3.3 MB 49.5 MB/s eta 0:00:00  
_____ 856.7/856.7 kB 33.7 MB/s eta 0:00:00
```

```
In [3]: from langchain_groq import ChatGroq
```

```
In [4]: from google.colab import userdata  
groq_api_key=userdata.get('GROQ_API_KEY')
```

```
In [5]: llm= ChatGroq(temperature=0.3, groq_api_key=groq_api_key,name="mixtral-8x7b-32768")
```

# Tools:

```
In [6]: from langchain_community.tools import DuckDuckGoSearchRun, YouTubeSearchTool
```

```
In [7]: tool1= DuckDuckGoSearchRun()  
tool2=YouTubeSearchTool(k=5)
```

```
In [30]: # response= tool1.invoke(input={"query": "What is ML?"})  
response= tool1.invoke(input= "Today's news Oscar Nominations 2025 full list")  
response
```

```
Out[30]: 'See the full list of 2025 Oscar nominations, from \'Wicked\' domination to Demi Moore\'s rise in Best Actress, with other top contenders for Best Picture, Best Actress, and more. After a delay following the fires in Los Angeles, the nominations for the 97th Academy Awards were announced Thursday morning, with "Emilia Perez," "The Brutalist" " and "Wicked ... After a few stops and starts, nominations for the 97th Academy Awards were announced on Jan. 23 at 8:30 a.m. ET. "Emilia Pérez" led the field with 13 nominations, the most ever for a non ... The Netflix musical crime thriller is up for best picture as well as best actress and best supporting actress at the 97th Academy Awards on March 2 (airing live on ABC and streaming on Hulu at 7 p ... The nominees for the 97th Academy Awards have been announced. Leading the way is Jacques Audiard\'s "Emilia Pérez," a Spanish language, French-made film, with 13 nominations, including best picture and best actress for Karla Sofía Gascón, making her the first openly trans actor ever nominated for an'
```

```
In [31]: response= tool2.invoke("Youtube videos on Agentic AI")
print(response)
```

```
['https://www.youtube.com/watch?v=F9LGHxDHULU&pp=ygUcWW91dHVhZSB2aWR1b3Mgb24gQWdlbnRpYyBBSQ%3D%3D', 'https://www.youtube.com/watch?v=0z9_Mh cYvcY&pp=ygUcWW91dHVhZSB2aWR1b3Mgb24gQWdlbnRpYyBBSQ%3D%3D']
```

## Tools + LLM:

```
In [32]: response= llm.invoke("Today's news Oscar Nominations 2025 full list")
response.content
```

```
Out[32]: "I'm unable to provide you with the full list of Oscar nominations for 2025, as it's more than three years away and the nominations have n't been announced yet. However, I can help you with any information you need about the Oscars or past nominations and winners.\n\nThe 93rd Academy Awards (Oscars) for the year 2021 were held recently, and the nominations were announced on March 15, 2021. Here are the nominees for some of the major categories:\n\nBest Picture:\n\n* The Father\n* Judas and the Black Messiah\n* Mank\n* Minari\n* Nomadland\n* Promising Young Woman\n* Sound of Metal\n* The Trial of the Chicago 7\n\nBest Director:\n\n* Thomas Vinterberg - Another Round\n* David Fincher - Mank\n* Lee Isaac Chung - Minari\n* Chloé Zhao - Nomadland\n* Emerald Fennell - Promising Young Woman\n\nBest Actor:\n\n* Riz Ahmed - Sound of Metal\n* Chadwick Boseman - Ma Rainey's Black Bottom\n* Anthony Hopkins - The Father\n* Gary Oldman - Mank\n* Steven Yeun - Minari\n\nBest Actress:\n\n* Viola Davis - Ma Rainey's Black Bottom\n* Andra Day - The United States vs. Billie Holiday\n* Vanessa Kirby - Pieces of a Woman\n* Frances McDormand - Nomadland\n* Carey Mulligan - Promising Young Woman\n\nBest Supporting Actor:\n\n* Sacha Baron Cohen - The Trial of the Chicago 7\n* Daniel Kaluuya - Judas and the Black Messiah\n* Leslie Odom Jr. - One Night in Miami...\n* Paul Raci - Sound of Metal\n* Lakeith Stanfield - Judas and the Black Messiah\n\nBest Supporting Actress:\n\n* Maria Bakalova - Borat Subsequent Moviefilm\n* Glenn Close - Hillbilly Elegy\n* Olivia Colman - The Father\n* Amanda Seyfried - Mank\n* Yuh-Jung Youn - Minari\n\nYou can find the complete list of nominations and winners for the 2021 Oscars on the official Academy Awards website."
```

```
In [33]: query="Today's news Oscar Nominations 2025 full list"
tool1_result= tool1.invoke(input=query)
response= llm.invoke(f"Based on the result of this tool:{tool1_result},Provide the Answer of {query} ")
response.content
```

```
Out[33]: 'The nominations for the 97th Academy Awards, also known as the Oscars, were announced on January 23, 2025. The film "Emilia Pérez" led the field with 13 nominations, including best picture and best actress for Karla Sofía Gascón. Gascón is the first openly trans actor to be nominated for an Oscar. Other notable nominees include "The Brutalist" and "Wicked" in the best picture category. The awards will be presented at a ceremony held at a later date. Stay tuned to Deadline for complete coverage, analysis, and reactions to the nominations.'
```

## Tools and Agents (using initialize\_agent):

These classes are from langchain version 0.1(legacy)

```
In [36]: tools= [tool1,tool2]
```

```
In [37]: from langchain.agents import initialize_agent, Tool
from langchain.agents import AgentType
from langchain.agents import load_tools
```

```
In [38]: agent= initialize_agent(tools=tools,llm=llm,agent=AgentType.ZERO_SHOT_REACT_DESCRIPTION,verbose=True)
```

```
<ipython-input-38-11a56d5d6b7d>:1: LangChainDeprecationWarning: LangChain agents will continue to be supported, but it is recommended for new use cases to be built with LangGraph. LangGraph offers a more flexible and full-featured framework for building agents, including support for tool-calling, persistence of state, and human-in-the-loop workflows. For details, refer to the `LangGraph documentation <https://langchain-ai.github.io/langgraph/>` as well as guides for `Migrating from AgentExecutor <https://python.langchain.com/docs/how_to/migrate_agent/>` and LangGraph's `Pre-built ReAct agent <https://langchain-ai.github.io/langgraph/how-to/create-react-agent/>`.
agent= initialize_agent(tools=tools,llm=llm,agent=AgentType.ZERO_SHOT_REACT_DESCRIPTION,verbose=True)
```

```
In [45]: agent.invoke("Today's news Oscar Nominations 2025 full list",max_iterations=3)
```

> Entering new AgentExecutor chain...

I need to find out the current news about the Oscar Nominations for the year 2025. However, it's currently 2022 and the Oscar Nominations for 2025 have not been announced yet. I can still look up the most recent news about the Oscars or the process of nominations to provide some relevant information.

Action: duckduckgo\_search

Action Input: "Oscar Nominations 2025"

Observation: After a delay following the fires in Los Angeles, the nominations for the 97th Academy Awards were announced Thursday morning, with "Emilia Pérez," "The Brutalist" and "Wicked ... The nominees for the 97th Academy Awards have been announced. Leading the way is Jacques Audiard's "Emilia Pérez," a Spanish language, French-made film, with 13 nominations, including best picture and best actress for Karla Sofía Gascón, making her the first openly trans actor ever nominated for an See the full list of 2025 Oscar nominations, from 'Wicked' domination to Demi Moore's rise in Best Actress, with other top contenders for Best Picture, Best Actress, and more. Oscar nominations 2025: See the full list of Academy Award nominees From Pamela Anderson to Daniel Craig, ... This year's Academy Awards is tweaking other aspects of its presentation as well. One ... The announcement of the 2025 Academy Awards nominees, originally set for Friday, Jan. 17, was delayed twice amid the Los Angeles wildfires, which have left at least 28 people dead with more than ...

Thought:I have found information about the Oscar Nominations for the year 2025 through a DuckDuckGo search. The nominations have been announced and the film "Emilia Pérez" leads with 13 nominations. Other notable nominees include Karla Sofía Gascón for Best Actress and Demi Moore in the Best Actress category. The awards ceremony is making some changes to its presentation this year as well.

Final Answer: The nominees for the 97th Academy Awards, also known as the Oscar Nominations for 2025, have been announced. The film "Emilia Pérez" leads with 13 nominations, including Best Picture and Best Actress for Karla Sofía Gascón. Other notable nominees include Demi Moore in the Best Actress category. The awards ceremony is making some changes to its presentation this year.

> Finished chain.

```
Out[45]: {'input': "Today's news Oscar Nominations 2025 full list",
          'output': 'The nominees for the 97th Academy Awards, also known as the Oscar Nominations for 2025, have been announced. The film "Emilia Pérez" leads with 13 nominations, including Best Picture and Best Actress for Karla Sofía Gascón. Other notable nominees include Demi Moore in the Best Actress category. The awards ceremony is making some changes to its presentation this year.'}
```

## Using Tool calling agent:

```
In [46]: from langchain.agents import create_tool_calling_agent, AgentExecutor
        from langchain import hub
```

```
In [64]: prompt = hub.pull("hwchase17/openai-functions-agent")
```

```
/usr/local/lib/python3.11/dist-packages/langsmith/client.py:256: LangSmithMissingAPIKeyWarning: API key must be provided when using hosted LangSmith API
warnings.warn(
```

```
In [65]: prompt.pretty_print()
```

```
===== System Message =====

You are a helpful assistant

===== Messages Placeholder =====

{chat_history}

===== Human Message =====

{input}

===== Messages Placeholder =====

{agent_scratchpad}
```

```
In [66]: agent= create_tool_calling_agent(llm=llm,tools=tools,prompt=prompt)
```

```
In [67]: agent_executor= AgentExecutor.from_agent_and_tools(agent=agent,tools=tools,verbose=True)
```

```
In [79]: response=agent_executor.invoke({"input":"Today's news Oscar Nominations 2025 full list."})
```

> Entering new AgentExecutor chain...

Invoking: `duckduckgo\_search` with `{'query': 'Oscar Nominations 2025 full list'}`

After a delay following the fires in Los Angeles, the nominations for the 97th Academy Awards were announced Thursday morning, with "Emilia Perez," "The Brutalist" " and "Wicked ... See the full list of 2025 Oscar nominations, from 'Wicked' domination to Demi Moore's rise in Best Actress, with other top contenders for Best Picture, Best Actress, and more. A complete list of the 2025 Oscar nominees. Emilia Pérez leads the 2025 Oscar nominations, which were revealed Thursday morning.. The film scored 13 noms, setting a record for a non-English ... The nominees for the 97th Academy Awards have been announced. Leading the way is Jacques Audiard's "Emilia Pérez," a Spanish language, French-made film, with 13 nominations, including best picture and best actress for Karla Sofía Gascón, making her the first openly trans actor ever nominated for an The 2025 Oscars ceremony is still set to take place on March 2, with Conan O'Brien hosting. To find out who might be taking the stage as a winner on March 2, read on for the full list of ...The 2025 Oscar nominations have been announced, with Emilia Pérez leading the way with 13 nominations, including for Best Picture and Best Actress. This Spanish language, French-made film has set a record for the most nominations for a non-English film. The nominees for the 97th Academy Awards have been revealed, with other top contenders for Best Picture and Best Actress, including Demi Moore. The 2025 Oscars ceremony will still take place on March 2, with Conan O'Brien hosting. To find out who might be taking the stage as a winner on March 2, you can refer to the full list of 2025 Oscar nominees.

> Finished chain.

```
In [80]: print(response['output'])
```

The 2025 Oscar nominations have been announced, with Emilia Pérez leading the way with 13 nominations, including for Best Picture and Best Actress. This Spanish language, French-made film has set a record for the most nominations for a non-English film. The nominees for the 97th Academy Awards have been revealed, with other top contenders for Best Picture and Best Actress, including Demi Moore. The 2025 Oscars ceremony will still take place on March 2, with Conan O'Brien hosting. To find out who might be taking the stage as a winner on March 2, you can refer to the full list of 2025 Oscar nominees.

```
In [ ]:
```