

# API Chains

## Contents

- OpenMeteo Example
- TMDB Example
- Listen API Example

This notebook showcases using LLMs to interact with APIs to retrieve relevant information.

```
from langchain.chains.api.prompt import API_RESPONSE_PROMPT
```

```
from langchain.chains import APIChain
from langchain.prompts.prompt import PromptTemplate

from langchain.llms import OpenAI

llm = OpenAI(temperature=0)
```

## OpenMeteo Example

```
from langchain.chains.api import open_meteo_docs
chain_new = APIChain.from_llm_and_api_docs(llm, open_meteo_docs.OPEN_METEO_DOCS,
verbose=True)
```

```
chain_new.run('What is the weather like right now in Munich, Germany in degrees Fahrenheit?')
```

```
> Entering new APIChain chain...
https://api.open-meteo.com/v1/forecast?
latitude=48.1351&longitude=11.5820&temperature_unit=fahrenheit&current_weather=true
```

[Skip to main content](#)

```
urrent_weather":
{"temperature":33.4,"windspeed":6.8,"winddirection":198.0,"weathercode":2,"time":"2
023-01-16T01:00"}}

> Finished chain.
```

' The current temperature in Munich, Germany is 33.4 degrees Farenheit with a windspeed of 6.8 km/h and a wind direction of 198 degrees. The weathercode is 2.'

## TMDB Example

```
import os
os.environ['TMDB_BEARER_TOKEN'] = ""
```

```
from langchain.chains.api import tmdb_docs
headers = {"Authorization": f"Bearer {os.environ['TMDB_BEARER_TOKEN']}"}
chain = APICChain.from_llm_and_api_docs(llm, tmdb_docs.TMDB_DOCS, headers=headers,
verbose=True)
```

```
chain.run("Search for 'Avatar'")
```

```
> Entering new APICChain chain...
https://api.themoviedb.org/3/search/movie?query=Avatar&language=en-US
{"page":1,"results":
[{"adult":false,"backdrop_path":"/o0s4XsEDfDlvt5pDRKjzXR4pp2.jpg","genre_ids":
[28,12,14,878],"id":19995,"original_language":"en","original_title":"Avatar","overv
iew":"In the 22nd century, a paraplegic Marine is dispatched to the moon Pandora
on a unique mission, but becomes torn between following orders and protecting an
alien
civilization.", "popularity":2041.691,"poster_path":"/jRXYjXNq0Cs2TcJjLkki24MLp7u.jp
g","release_date":"2009-12-
15","title":"Avatar","video":false,"vote_average":7.6,"vote_count":27777},
{"adult":false,"backdrop_path":"/s16H6tpK2utvwDtzZ8Qy4qm5Emw.jpg","genre_ids":
[878,12,28],"id":76600,"original_language":"en","original_title":"Avatar: The Way
of Water","overview":"Set more than a decade after the events of the first film,
learn the story of the Sully family (Jake, Neytiri, and their kids), the trouble
that follows them, the lengths they go to keep each other safe, the battles they
fight to stay alive, and the tragedies they
endure.", "popularity":3948.296,"poster_path":"/t6HIqrRAclMCA60NsSmeqe9RmNV.jpg","re
lease_date":"2022-12-14","title":"Avatar: The Way of
Water","video":false,"vote_average":7.7,"vote_count":4219},
{"adult":false,"backdrop_path":"/uFwGEGt3a09VG21olmdvtH11VbA9.jpg","genre_ids":
```

[Skip to main content](#)

```

interesting parts of the work on the
set.", "popularity": 541.809, "poster_path": "/sjf3xjuofCtDhZghJRzXlTiEjJe.jpg", "releas
e_date": "2010-02-07", "title": "Avatar: Creating the World of
Pandora", "video": false, "vote_average": 7.3, "vote_count": 35},
{"adult": false, "backdrop_path": null, "genre_ids":
[99], "id": 287003, "original_language": "en", "original_title": "Avatar: Scene
Deconstruction", "overview": "The deconstruction of the Avatar scenes and
sets", "popularity": 394.941, "poster_path": "/uCreCQFreeF0RiIXkQypRYHwikx.jpg", "releas
e_date": "2009-12-18", "title": "Avatar: Scene
Deconstruction", "video": false, "vote_average": 7.8, "vote_count": 12},
{"adult": false, "backdrop_path": null, "genre_ids":
[28, 18, 878, 12, 14], "id": 83533, "original_language": "en", "original_title": "Avatar
3", "overview": "", "popularity": 172.488, "poster_path": "/4rXqTmlkEaMiJjiG0Z2BX6F6Dkm.j
pg", "release_date": "2024-12-18", "title": "Avatar
3", "video": false, "vote_average": 0, "vote_count": 0},
{"adult": false, "backdrop_path": null, "genre_ids":
[28, 878, 12, 14], "id": 216527, "original_language": "en", "original_title": "Avatar
4", "overview": "", "popularity": 162.536, "poster_path": "/qzMYKnT4MG1d0gnhwytr4cKhUvS.j
pg", "release_date": "2026-12-16", "title": "Avatar
4", "video": false, "vote_average": 0, "vote_count": 0},
{"adult": false, "backdrop_path": null, "genre_ids":
[28, 12, 14, 878], "id": 393209, "original_language": "en", "original_title": "Avatar
5", "overview": "", "popularity": 124.722, "poster_path": "/rtmmvqkIC5zDMEd638Es2woxbz8.j
pg", "release_date": "2028-12-20", "title": "Avatar
5", "video": false, "vote_average": 0, "vote_count": 0},
{"adult": false, "backdrop_path": "/nNceJtrrovG1MUBHMAhId0ws9Gp.jpg", "genre_ids":
[99], "id": 183392, "original_language": "en", "original_title": "Capturing
Avatar", "overview": "Capturing Avatar is a feature length behind-the-scenes
documentary about the making of Avatar. It uses footage from the film's
development, as well as stock footage from as far back as the production of
Titanic in 1995. Also included are numerous interviews with cast, artists, and
other crew members. The documentary was released as a bonus feature on the
extended collector's edition of
Avatar.", "popularity": 109.842, "poster_path": "/26SMEXJl3978dn2svWBSqHbLl5U.jpg", "rel
ease_date": "2010-11-16", "title": "Capturing
Avatar", "video": false, "vote_average": 7.8, "vote_count": 39},
{"adult": false, "backdrop_path": "/eoAvHxfbaP0cfiQyjqypWIXWxDr.jpg", "genre_ids":
[99], "id": 1059673, "original_language": "en", "original_title": "Avatar: The Deep Dive
- A Special Edition of 20/20", "overview": "An inside look at one of the most
anticipated movie sequels ever with James Cameron and
cast.", "popularity": 629.825, "poster_path": "/rtVeIsmeXnpjNbEKnm9Say58XjV.jpg", "relea
se_date": "2022-12-14", "title": "Avatar: The Deep Dive - A Special Edition of
20/20", "video": false, "vote_average": 6.5, "vote_count": 5},
{"adult": false, "backdrop_path": null, "genre_ids":
[99], "id": 278698, "original_language": "en", "original_title": "Avatar
Spirits", "overview": "Bryan Konietzko and Michael Dante DiMartino, co-creators of
the hit television series, Avatar: The Last Airbender, reflect on the creation of
the masterful
series.", "popularity": 51.593, "poster_path": "/oBWVyOdntLJd5bBpE0wkpN6B6vy.jpg", "rele
ase_date": "2010-06-22", "title": "Avatar
Spirits", "video": false, "vote_average": 9, "vote_count": 16},
{"adult": false, "backdrop_path": "/cACUWJkVrFhXge7NC0xxoQnkQNu.jpg", "genre_ids":
[10402], "id": 993545, "original_language": "fr", "original_title": "Avatar - Au
hell fest

```

[Skip to main content](#)

```

2022", "video": false, "vote_average": 8, "vote_count": 4},
{"adult": false, "backdrop_path": null, "genre_ids":
[], "id": 931019, "original_language": "en", "original_title": "Avatar: Enter The
World", "overview": "A behind the scenes look at the new James Cameron blockbuster
“Avatar”, which stars Aussie Sam Worthington. Hastily produced by Australia’s Nine
Network following the film’s
release.", "popularity": 30.903, "poster_path": "/9MHY9pYAgS91Ef7YFGWEbP4WJqC.jpg", "rel
ease_date": "2009-12-05", "title": "Avatar: Enter The
World", "video": false, "vote_average": 2, "vote_count": 1},
{"adult": false, "backdrop_path": null, "genre_ids":
[], "id": 287004, "original_language": "en", "original_title": "Avatar: Production
Materials", "overview": "Production material overview of what was used in
Avatar", "popularity": 12.389, "poster_path": null, "release_date": "2009-12-
18", "title": "Avatar: Production
Materials", "video": true, "vote_average": 6, "vote_count": 4},
{"adult": false, "backdrop_path": "/x43RWEZg9tYRPgnm43GyIB4t1ER.jpg", "genre_ids":
[], "id": 740017, "original_language": "es", "original_title": "Avatar: Agni
Kai", "overview": "", "popularity": 9.462, "poster_path": "/y9PrKMUTA6NfIe5FE92tdwOQ2sH.j
pg", "release_date": "2020-01-18", "title": "Avatar: Agni
Kai", "video": false, "vote_average": 7, "vote_count": 1},
{"adult": false, "backdrop_path": "/e8mmDO7fKK93T4lnxl4Z2zjxXZV.jpg", "genre_ids":
[], "id": 668297, "original_language": "en", "original_title": "The Last
Avatar", "overview": "The Last Avatar is a mystical adventure film, a story of a
young man who leaves Hollywood to find himself. What he finds is beyond his
wildest imagination. Based on ancient prophecy, contemporary truth seeking and the
future of humanity, The Last Avatar is a film that takes transformational themes
and makes them relevant for audiences of all ages. Filled with love, magic,
mystery, conspiracy, psychics, underground cities, secret societies, light bodies
and much more, The Last Avatar tells the story of the emergence of Kalki Avatar-
the final Avatar of our current Age of Chaos. Kalki is also a metaphor for the
innate power and potential that lies within humanity to awaken and create a world
of truth, harmony and
possibility.", "popularity": 8.786, "poster_path": "/XWz5SS5g5mrNEZjv3FiGhqCMOQ.jpg", "r
elease_date": "2014-12-06", "title": "The Last
Avatar", "video": false, "vote_average": 4.5, "vote_count": 2},
{"adult": false, "backdrop_path": null, "genre_ids":
[], "id": 424768, "original_language": "en", "original_title": "Avatar: [2015] Wacken
Open Air", "overview": "Started in the summer of 2001 by drummer John Alfredsson and
vocalist Christian Rimmi under the name Lost Soul. The band offers a free mp3
download to a song called \"Bloody Knuckles\" if one subscribes to their
newsletter. In 2005 they appeared on the compilation “Listen to Your Inner Voice”
together with 17 other bands released by Inner Voice
Records.", "popularity": 6.634, "poster_path": null, "release_date": "2015-08-
01", "title": "Avatar: [2015] Wacken Open
Air", "video": false, "vote_average": 8, "vote_count": 1},
{"adult": false, "backdrop_path": null, "genre_ids":
[], "id": 812836, "original_language": "en", "original_title": "Avatar - Live At Graspop
2018", "overview": "Live At Graspop Festival Belgium
2018", "popularity": 9.855, "poster_path": null, "release_date": "", "title": "Avatar -
Live At Graspop 2018", "video": false, "vote_average": 9, "vote_count": 1},
{"adult": false, "backdrop_path": null, "genre_ids":
[10402], "id": 874770, "original_language": "en", "original_title": "Avatar Ages:
Memories", "overview": "On the night of memories Avatar performed songs from
Thoughts of No Tomorrow, Schlacht and Avatar as voted on by the

```

[Skip to main content](#)

```
Memories", "video": false, "vote_average": 10, "vote_count": 1},
{"adult": false, "backdrop_path": null, "genre_ids":
[10402], "id": 874768, "original_language": "en", "original_title": "Avatar Ages:
Madness", "overview": "On the night of madness Avatar performed songs from Black
Waltz and Hail The Apocalypse as voted on by the
fans.", "popularity": 2.024, "poster_path": "/wVyTuruUctV3UbdzE5cncnpyNoY.jpg", "release
_date": "2021-01-23", "title": "Avatar Ages:
Madness", "video": false, "vote_average": 8, "vote_count": 1},
{"adult": false, "backdrop_path": "/dj8g4jrYMfK6tQ26ra3Iaq0x5Ho.jpg", "genre_ids":
[10402], "id": 874700, "original_language": "en", "original_title": "Avatar Ages:
Dreams", "overview": "On the night of dreams Avatar performed Hunter Gatherer in its
entirety, plus a selection of their most popular songs. Originally aired January
9th
2021", "popularity": 1.957, "poster_path": "/4twG59wnuHpGIRR9gYsqZnVysSP.jpg", "release
_date": "2021-01-09", "title": "Avatar Ages:
Dreams", "video": false, "vote_average": 0, "vote_count": 0}], "total_pages": 3, "total_resu
lts": 57}
```

> Finished chain.

' This response contains 57 movies related to the search query "Avatar". The first movie in the list is the 2009 movie "Avatar" starring Sam Worthington. Other movies in the list include sequels to Avatar, documentaries, and live performances.'

## Listen API Example

```
import os
from langchain.llms import OpenAI
from langchain.chains.api import podcast_docs
from langchain.chains import APICChain

# Get api key here: https://www.listennotes.com/api/pricing/
listen_api_key = 'xxx'

llm = OpenAI(temperature=0)
headers = {"X-ListenAPI-Key": listen_api_key}
chain = APICChain.from_llm_and_api_docs(llm, podcast_docs.PODCAST_DOCS,
headers=headers, verbose=True)
chain.run("Search for 'silicon valley bank' podcast episodes, audio length is more
than 30 minutes, return only 1 results")
```