



Modules

Agents

Tools

Integrations

Google Serper API

Google Serper API

This notebook goes over how to use the Google Serper component to search the web. First you need to sign up for a free account at serper.dev and get your api key.

```
import os
import pprint

os.environ["SERPER_API_KEY"] = ""

from langchain.utilities import GoogleSerperAPIWrapper

search = GoogleSerperAPIWrapper()

search.run("Obama's first name?")

'Barack Hussein Obama II'
```

As part of a Self Ask With Search Chain

```
os.environ["OPENAI_API_KEY"] = ""

from langchain.utilities import GoogleSerperAPIWrapper
from langchain.llms.openai import OpenAI
from langchain.agents import initialize_agent, Tool
from langchain.agents import AgentType

llm = OpenAI(temperature=0)
search = GoogleSerperAPIWrapper()
tools = [
    Tool(
        name="Intermediate Answer",
```

```
func=search.run,  
description="useful for when you need to ask with search",  
)  
]  
  
self_ask_with_search = initialize_agent(  
    tools, llm, agent=AgentType.SELF_ASK_WITH_SEARCH, verbose=True  
)  
self_ask_with_search.run(  
    "What is the hometown of the reigning men's U.S. Open champion?"  
)
```

```
> Entering new AgentExecutor chain...  
Yes.  
Follow up: Who is the reigning men's U.S. Open champion?  
Intermediate answer: Current champions Carlos Alcaraz, 2022 men's singles  
champion.  
Follow up: Where is Carlos Alcaraz from?  
Intermediate answer: El Palmar, Spain  
So the final answer is: El Palmar, Spain
```

```
> Finished chain.
```

```
'El Palmar, Spain'
```

Obtaining results with metadata

If you would also like to obtain the results in a structured way including metadata. For this we will be using the `results` method of the wrapper.

```
search = GoogleSerperAPIWrapper()  
results = search.results("Apple Inc.")  
pprint.pprint(results)
```

```
{'searchParameters': {'q': 'Apple Inc.',
                      'gl': 'us',
                      'hl': 'en',
                      'num': 10,
                      'type': 'search'},
 'knowledgeGraph': {'title': 'Apple',
                    'type': 'Technology company',
                    'website': 'http://www.apple.com/',
                    'imageUrl': 'https://encrypted-
tbn0.gstatic.com/images?q=tbn:ANd9GcQwGQRv5TjjkycpctY66m0g_e2-
npacrmjAb6_jAWhzlzkFE3OTjxyzbA&s=0',
                    'description': 'Apple Inc. is an American
multinational '
                                'technology company headquartered in '
                                'Cupertino, California. Apple is the '
                                "world's largest technology company by
"
                                'revenue, with US$394.3 billion in 2022
'
                    'revenue. As of March 2023, Apple is
the '
                                "world's biggest...",

                    'descriptionSource': 'Wikipedia',
                    'descriptionLink':
'https://en.wikipedia.org/wiki/Apple_Inc.',
                    'attributes': {'Customer service': '1 (800) 275-2273',
                                   'CEO': 'Tim Cook (Aug 24, 2011-)',
                                   'Headquarters': 'Cupertino, CA',
                                   'Founded': 'April 1, 1976, Los Altos,
CA',
                                   'Founders': 'Steve Jobs, Steve Wozniak,
'
                                   'Ronald Wayne, and more',
                                   'Products': 'iPhone, iPad, Apple TV,
and '
                                   'more'}}},
 'organic': [ {'title': 'Apple',
               'link': 'https://www.apple.com/',
               'snippet': 'Discover the innovative world of Apple and shop
'
                           'everything iPhone, iPad, Apple Watch, Mac, and
Apple '
                           'TV, plus explore accessories, entertainment,
...
               'sitelinks': [ {'title': 'Support',
                               'link': 'https://support.apple.com/'},
}

```

```

        {'title': 'iPhone',
         'link': 'https://www.apple.com/iphone/'},
        {'title': 'Site Map',
         'link': 'https://www.apple.com/sitemap/'},
        {'title': 'Business',
         'link': 'https://www.apple.com/business/'},
        {'title': 'Mac',
         'link': 'https://www.apple.com/mac/'},
        {'title': 'Watch',
         'link': 'https://www.apple.com/watch/'}],
        'position': 1},
        {'title': 'Apple Inc. - Wikipedia',
         'link': 'https://en.wikipedia.org/wiki/Apple_Inc.',
         'snippet': 'Apple Inc. is an American multinational
technology '}
                           'company headquartered in Cupertino, California.

        "Apple is the world's largest technology company
by "
                           'revenue, ...',
        'attributes': {'Products': 'AirPods; Apple Watch; iPad;
iPhone; '
                           'Mac; Full list',
                           'Founders': 'Steve Jobs; Steve Wozniak;
Ronald '
                           'Wayne; Mike Markkula'},
        'sitelinks': [ {'title': 'History',
                       'link':
'https://en.wikipedia.org/wiki/History_of_Apple_Inc.'},
                       {'title': 'Timeline of Apple Inc. products',
                        'link':
'https://en.wikipedia.org/wiki/Timeline_of_Apple_Inc._products'},
                       {'title': 'Litigation involving Apple Inc.',
                        'link':
'https://en.wikipedia.org/wiki/Litigation_involving_Apple_Inc.'},
                       {'title': 'Apple Store',
                        'link':
'https://en.wikipedia.org/wiki/Apple_Store'}],
        'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?
q=tbn:ANd9GcRvmB5fT1LjqpZx02UM7IJq0Buoqt0DZs_y0dqwxwSwYp4PIN9FaxuTea0&s',
        'position': 2},
        {'title': 'Apple Inc. | History, Products, Headquarters, &
Facts '}
                           '| Britannica',
        'link': 'https://www.britannica.com/topic/Apple-Inc',
        'snippet': 'Apple Inc., formerly Apple Computer, Inc.,
American '

```

'manufacturer of personal computers, smartphones,
tablet computers, computer peripherals, and
computer '

'...',
'attributes': {'Related People': 'Steve Jobs Steve Wozniak
Jony
Ahrendts',
'Date': '1976 - present'},
'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?
q=tbn:ANd9GcS3liELlhrMz3Wpsox29U8jJ3L8qETR0hBWHXbFnwjwQc34zwZvFELst2E&s',
'position': 3},
{'title': 'AAPL: Apple Inc Stock Price Quote - NASDAQ GS -
Bloomberg.com',
'link': 'https://www.bloomberg.com/quote/AAPL:US',
'snippet': 'AAPL:USNASDAQ GS. Apple Inc. COMPANY INFO ;
Open. '
'170.09 ; Prev Close. 169.59 ; Volume. 48,425,696
; '
'Market Cap. 2.667T ; Day Range. 167.54170.35.',
'position': 4},
{'title': 'Apple Inc. (AAPL) Company Profile & Facts - Yahoo

'Finance',
'link': 'https://finance.yahoo.com/quote/AAPL/profile/',
'snippet': 'Apple Inc. designs, manufactures, and markets '
'smartphones, personal computers, tablets,
wearables, '
'and accessories worldwide. The company offers '
'iPhone, a line ...',
'position': 5},
{'title': 'Apple Inc. (AAPL) Stock Price, News, Quote &
History - '
'Yahoo Finance',
'link': 'https://finance.yahoo.com/quote/AAPL',
'snippet': 'Find the latest Apple Inc. (AAPL) stock quote,
'history, news and other vital information to
help '
'you with your stock trading and investing.',
'position': 6}],
'peopleAlsoAsk': [{question': 'What does Apple Inc do?',
'snippet': 'Apple Inc. (Apple) designs, manufactures
and '
'markets smartphones, personal\n'
'computers, tablets, wearables and
accessories '

'and sells a range of related\n' 'services.',
'title': 'AAPL.O - | Stock Price & Latest News - Reuters',
'link':
'https://www.reuters.com/markets/companies/AAPL.O/'},
{'question': 'What is the full form of Apple Inc?',
'snippet': '(formerly Apple Computer Inc.) is an American '
'computer and consumer electronics\n'
'company famous for creating the iPhone,
iPad '
'and Macintosh computers.',
'title': 'What is Apple? An products and history overview '
'- TechTarget',
'link':
'https://www.techtarget.com/whatis/definition/Apple'},
{'question': 'What is Apple Inc iPhone?',
'snippet': 'Apple Inc (Apple) designs, manufactures,
and '
'markets smartphones, tablets,\n'
'personal computers, and wearable devices.
The '
'company also offers software\n'
'applications and related services, '
'accessories, and third-party digital
content.\n'
"Apple's product portfolio includes iPhone,
"
'iPad, Mac, iPod, Apple Watch, and\n'
'Apple TV.',
'title': 'Apple Inc Company Profile - Apple Inc
Overview - '
'GlobalData',
'link': 'https://www.globaldata.com/company-
profile/apple-inc/'),
{'question': 'Who runs Apple Inc?',
'snippet': 'Timothy Donald Cook (born November 1,
1960) is '
'an American business executive\n'
'who has been the chief executive officer
of '
'Apple Inc. since 2011. Cook\n'
'previously served as the company's chief
'operating officer under its co-founder\n'
'Steve Jobs. He is the first CEO of any

Fortune '

```

        '500 company who is openly gay.',  

        'title': 'Tim Cook - Wikipedia',  

        'link': 'https://en.wikipedia.org/wiki/Tim_Cook'}],  

'relatedSearches': [{"query": "Who invented the iPhone"},  

    {"query": "Apple iPhone"},  

    {"query": "History of Apple company PDF"},  

    {"query": "Apple company history"},  

    {"query": "Apple company introduction"},  

    {"query": "Apple India"},  

    {"query": "What does Apple Inc own"},  

    {"query": "Apple Inc After Steve"},  

    {"query": "Apple Watch"},  

    {"query": "Apple App Store"}]}

```

Searching for Google Images

We can also query Google Images using this wrapper. For example:

```

search = GoogleSerperAPIWrapper(type="images")
results = search.results("Lion")
pprint.pprint(results)

```

```

{'searchParameters': {'q': 'Lion',
                      'gl': 'us',
                      'hl': 'en',
                      'num': 10,
                      'type': 'images'},
 'images': [{'title': 'Lion - Wikipedia',
             'imageUrl':
                 'https://upload.wikimedia.org/wikipedia/commons/thumb/7/73/Lion_waiting_in_Namibia_Lion_waiting_in_Namibia.jpg',
             'imageWidth': 1200,
             'imageHeight': 900,
             'thumbnailUrl': 'https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcRye79ROKwjfb6017jr0iu8Bz2E1KKuHg-A4qINJaspyxkZrkw&s',
             'thumbnailWidth': 259,
             'thumbnailHeight': 194,
             'source': 'Wikipedia',
             'domain': 'en.wikipedia.org',
             'link': 'https://en.wikipedia.org/wiki/Lion',
             'position': 1},
            {'title': 'Lion | Characteristics, Habitat, & Facts | Britannica'}
}

```

```
'imageUrl': 'https://cdn.britannica.com/55/2155-050-604F5A4A/li  
'imageWidth': 754,  
'imageHeight': 752,  
'thumbnailUrl': 'https://encrypted-tbn0.gstatic.com/images?  
q=tbn:ANd9GcS3fnDub1GSojI0hJ-ZGS8Tv-hkNNloXh98D0wXZoZ_nUs3GWSd&s',  
'thumbnailWidth': 225,  
'thumbnailHeight': 224,  
'source': 'Encyclopedia Britannica',  
'domain': 'www.britannica.com',  
'link': 'https://www.britannica.com/animal/lion',  
'position': 2},  
{'title': 'African lion, facts and photos',  
'imageUrl': 'https://i.natgeofe.com/n/487a0d69-8202-406f-a6a0-9  
lion.JPG',  
'imageWidth': 3072,  
'imageHeight': 2043,  
'thumbnailUrl': 'https://encrypted-tbn0.gstatic.com/images?  
q=tbn:ANd9GcTP1TarrtDbyTiEm-VI_PML9VtOTVPuDXJ5ybDf_lN11H2mShk&s',  
'thumbnailWidth': 275,  
'thumbnailHeight': 183,  
'source': 'National Geographic',  
'domain': 'www.nationalgeographic.com',  
'link': 'https://www.nationalgeographic.com/animals/mammals/fac  
'position': 3},  
{'title': 'Saint Louis Zoo | African Lion',  
'imageUrl': 'https://optimise2.assets-servd.host/maniacal-  
finch/production/animals/african-lion-01-01.jpg?  
w=1200&auto=compress%2Cformat&fit=crop&dm=1658933674&s=4b63f926a0f524f2087a8e061  
'imageWidth': 1200,  
'imageHeight': 1200,  
'thumbnailUrl': 'https://encrypted-tbn0.gstatic.com/images?  
q=tbn:ANd9GcTlewcJ5SwC7yKup6ByaOjTnAFDeo0iMxyJTQaph2W_I3dnks4&s',  
'thumbnailWidth': 225,  
'thumbnailHeight': 225,  
'source': 'St. Louis Zoo',  
'domain': 'stlzoo.org',  
'link': 'https://stlzoo.org/animals/mammals/carnivores/lion',  
'position': 4},  
{'title': 'How to Draw a Realistic Lion like an Artist - Studio  
Wildlife',  
'imageUrl': 'https://studiolife.com/wp-  
content/uploads/2021/10/245528858_183911853822648_6669060845725210519_n.jpg',  
'imageWidth': 1431,  
'imageHeight': 2048,  
'thumbnailUrl': 'https://encrypted-tbn0.gstatic.com/images?  
q=tbn:ANd9GcTmn5HayVj3wqoBDQacnUtzaDPZzYHSLKULIEcni6VB8w0mVeA&s',  
'thumbnailWidth': 188,
```

```
'thumbnailHeight': 269,
'source': 'Studio Wildlife',
'domain': 'studiowildlife.com',
'link': 'https://studiowildlife.com/how-to-draw-a-realistic-lion',
'position': 5},
{'title': 'Lion | Characteristics, Habitat, & Facts | Britannica',
'imageUrl': 'https://cdn.britannica.com/29/150929-050-547070A1/Mara-National-Reserve.jpg',
'imageWidth': 1600,
'imageHeight': 1085,
'thumbnailUrl': 'https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcSCqaKY_TNr0IBZN8c-2VApnnbuvKmnsWjfrwKoWHFR9w3eN5o&s',
'thumbnailWidth': 273,
'thumbnailHeight': 185,
'source': 'Encyclopedia Britannica',
'domain': 'www.britannica.com',
'link': 'https://www.britannica.com/animal/lion',
'position': 6},
{'title': "Where do lions live? Facts about lions' habitats and
other cool facts",
'imageUrl': 'https://www.gannett-cdn.com/-mm-/b2b05a4ab25f4fcfa0316459e1c7404c537a89702/c=0-0-1365-
768/local/-/media/2022/03/16/USATODAY/usatsports/imageForEntry5-0Dq.jpg?
width=1365&height=768&fit=crop&format=pjpg&auto=webp',
'imageWidth': 1365,
'imageHeight': 768,
'thumbnailUrl': 'https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcTc_4vCHscgvFvYy3PSrtIOE81kNLAfDK8F3mf0uotL0kUkbs&s',
'thumbnailWidth': 299,
'thumbnailHeight': 168,
'source': 'USA Today',
'domain': 'www.usatoday.com',
'link': 'https://www.usatoday.com/story/news/2023/01/08/where-d
habitat/10927718002/',
'position': 7},
{'title': 'Lion',
'imageUrl': 'https://i.natgeofe.com/k/1d33938b-3d02-4773-91e3-7
male-roar_square.jpg',
'imageWidth': 3072,
'imageHeight': 3072,
'thumbnailUrl': 'https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQqLfnBrBLcTiyTZynHH3FGbBtX2bd1ScwpcuOLnksTyS9-4GM&s',
'thumbnailWidth': 225,
'thumbnailHeight': 225,
'source': 'National Geographic Kids',
'domain': 'kids.nationalgeographic.com',
'link': 'https://kids.nationalgeographic.com/animals/mammals/fa
```

```

        'position': 8},
        {'title': "Lion | Smithsonian's National Zoo",
         'imageUrl':
'https://nationalzoo.si.edu/sites/default/files/styles/1400_scale/public/animals
005.jpg?itok=6wA745g_',
          'imageWidth': 1400,
          'imageHeight': 845,
          'thumbnailUrl': 'https://encrypted-tbn0.gstatic.com/images?
q=tbn:ANd9GcSgB3z_D4dMEOWJ7lajJk4XaQSL4DdUvIRj4UXZ0YoE5fGuLuo&s',
          'thumbnailWidth': 289,
          'thumbnailHeight': 174,
          'source': "Smithsonian's National Zoo",
          'domain': 'nationalzoo.si.edu',
          'link': 'https://nationalzoo.si.edu/animals/lion',
          'position': 9},
        {'title': "Zoo's New Male Lion Explores Habitat for the First Ti
                     '- Virginia Zoo',
         'imageUrl': 'https://virginiazoo.org/wp-content/uploads/2022/04
scaled.jpg',
          'imageWidth': 2560,
          'imageHeight': 2141,
          'thumbnailUrl': 'https://encrypted-tbn0.gstatic.com/images?
q=tbn:ANd9GcTDCG7XvXRCwpe_-Vy5mpvrQpVl5q2qwgnDklQhrJpQzObQGz4&s',
          'thumbnailWidth': 246,
          'thumbnailHeight': 205,
          'source': 'Virginia Zoo',
          'domain': 'virginiazoo.org',
          'link': 'https://virginiazoo.org/zoo-new-male-lion-explores-ha
time/',
          'position': 10}]}
    
```

Searching for Google News

We can also query Google News using this wrapper. For example:

```

search = GoogleSerperAPIWrapper(type="news")
results = search.results("Tesla Inc.")
pprint.pp(results)
    
```

```

{'searchParameters': {'q': 'Tesla Inc.',
                      'gl': 'us',
                      'hl': 'en'},
    
```

```
'num': 10,
      'type': 'news'},
  'news': [ {'title': 'ISS recommends Tesla investors vote against re-election '
                    'of Robyn Denholm',
            'link': 'https://www.reuters.com/business/autos-
transportation/iss-recommends-tesla-investors-vote-against-re-election-robyn-
denholm-2023-05-04/',
            'snippet': 'Proxy advisory firm ISS on Wednesday recommended
Tesla '
                    'investors vote against re-election of board chair
Robyn '
                    'Denholm, citing "concerns on...",
            'date': '5 mins ago',
            'source': 'Reuters',
            'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?
q=tbn:ANd9GcR0dETe_GUyp1e8RHNhaRM8Z_vfxCvdfinZwzL1bT1ZGSYagTeOojIdBoLevA&s',
            'position': 1},
          {'title': 'Global companies by market cap: Tesla fell most in
April',
            'link': 'https://www.reuters.com/markets/global-companies-by-
market-cap-tesla-fell-most-april-2023-05-02/',
            'snippet': 'Tesla Inc was the biggest loser among top companies
by '
                    'market capitalisation in April, hit by
disappointing '
                    'quarterly earnings after it...',
            'date': '1 day ago',
            'source': 'Reuters',
            'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?
q=tbn:ANd9GcQ4u4CP8a0dGyRFH6o4PkXi-_eZDeY96vLSag5gDjhKMYf98YBER2cZPbkStQ&s',
            'position': 2},
          {'title': 'Tesla Wanted an EV Price War. Ford Showed Up.',
            'link': 'https://www.bloomberg.com/opinion/articles/2023-05-
03/tesla-wanted-an-ev-price-war-ford-showed-up',
            'snippet': 'The legacy automaker is paring back the cost of its
'
                    'Mustang Mach-E model after Tesla discounted its '
                    'competing EVs, portending tighter...',
            'date': '6 hours ago',
            'source': 'Bloomberg.com',
            'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?
q=tbn:ANd9GcS_3Eo4VI0H-nTeIbYc5DaQn5ep7YrWnmhx6pv8XddFgNF5zRC9gEpHfDq8yQ&s',
            'position': 3},
          {'title': 'Joby Aviation to get investment from Tesla
shareholder '
                    'Baillie Gifford',
            'link': 'https://www.reuters.com/markets/global-companies-by-
market-cap-tesla-fell-most-april-2023-05-02/',
            'snippet': 'Tesla Inc was the biggest loser among top companies
by '
                    'market capitalisation in April, hit by
disappointing '
                    'quarterly earnings after it...',
            'date': '1 day ago',
            'source': 'Reuters',
            'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?
q=tbn:ANd9GcQ4u4CP8a0dGyRFH6o4PkXi-_eZDeY96vLSag5gDjhKMYf98YBER2cZPbkStQ&s',
            'position': 2},
          {'title': 'Joby Aviation to get investment from Tesla
shareholder '
                    'Baillie Gifford',
            'link': 'https://www.reuters.com/markets/global-companies-by-
market-cap-tesla-fell-most-april-2023-05-02/',
            'snippet': 'Tesla Inc was the biggest loser among top companies
by '
                    'market capitalisation in April, hit by
disappointing '
                    'quarterly earnings after it...',
            'date': '1 day ago',
            'source': 'Reuters',
            'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?
q=tbn:ANd9GcQ4u4CP8a0dGyRFH6o4PkXi-_eZDeY96vLSag5gDjhKMYf98YBER2cZPbkStQ&s',
            'position': 2}]]
```

```
'link': 'https://finance.yahoo.com/news/joby-aviation-investment-tesla-shareholder-204450712.html',
    'snippet': 'This comes days after Joby clinched a $55 million ' +
                'contract extension to deliver up to nine air taxis
to ' +
                'the U.S. Air Force,...',
    'date': '4 hours ago',
    'source': 'Yahoo Finance',
    'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQ00uVn297LI-xryrPNqJ-apUOulj4ohM-xkN4OfmvMOYh1CPdUEBbYx6hviw&s',
    'position': 4},
{'title': 'Tesla resumes U.S. orders for a Model 3 version at
lower ' +
                'price, range',
    'link': 'https://finance.yahoo.com/news/tesla-resumes-us-orders-model-045736115.html',
    'snippet': '(Reuters) -Tesla Inc has resumed taking orders for
its ' +
                'Model 3 long-range vehicle in the United States,
the ' +
                "company's website showed late on...",
    'date': '19 hours ago',
    'source': 'Yahoo Finance',
    'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcTIZetJ62sQefPfbQ9KKDt6iH7Mc0ylT5t_hpgeeuUkHhJuAx2FOJ4ZTRVDFg&s',
    'position': 5},
{'title': 'The Tesla Model 3 Long Range AWD Is Now Available in
the ' +
                'U.S. With 325 Miles of Range',
    'link': 'https://www.notateslaapp.com/news/1393/tesla-reopens-orders-for-model-3-long-range-after-months-of-unavailability',
    'snippet': 'Tesla has reopened orders for the Model 3 Long
Range ' +
                'RWD, which has been unavailable for months due to
high ' +
                'demand.',
    'date': '7 hours ago',
    'source': 'Not a Tesla App',
    'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcSecrgxZpRj18xIJY-nDHLjyP-A4ejEkswa9eq77qhMNrScnVIqe34uql5U4w&s',
    'position': 6},
{'title': 'Tesla Cybertruck alpha prototype spotted at the
Fremont ' +
                'factory in new pics and videos',
    'link': 'https://www.teslaoracle.com/2023/05/03/tesla-cybertruck-alpha-prototype-interior-and-exterior-spotted-at-the-fremont-factory-in-new-pics-and-videos/'},
```

```
'snippet': 'A Tesla Cybertruck alpha prototype goes to Fremont,
California for another round of testing before
going to '
    'production later this year (pics...',  

    'date': '14 hours ago',
    'source': 'Tesla Oracle',
    'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?
q=tbn:ANd9GcR07M5ZLQE-Zo4-_5dv9hNAQZ3wSqvYCuKqzxHG-M6CgLpwPMMG_ssebdcmg&s',
    'position': 7},
{'title': 'Tesla putting facility in new part of country -
Austin '
    'Business Journal',
    'link':
'https://www.bizjournals.com/austin/news/2023/05/02/tesla-leases-building-
seattle-area.html',
    'snippet': 'Check out what Puget Sound Business Journal has to
'
    "report about the Austin-based company's real estate
"
    'footprint in the Pacific Northwest.',
    'date': '22 hours ago',
    'source': 'The Business Journals',
    'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?
q=tbn:ANd9GcR9kIEHWz1FcHKDUTGQBS0AjmkqtyuBkQvD8kyIY3kpaPrgYaN7I_H2zo0JsA&s',
    'position': 8},
{'title': 'Tesla (TSLA) Resumes Orders for Model 3 Long Range
After '
    'Backlog',
    'link': 'https://www.bloomberg.com/news/articles/2023-05-
03/tesla-resumes-orders-for-popular-model-3-long-range-at-47-240',
    'snippet': 'Tesla Inc. has resumed taking orders for its Model
3 '
    'Long Range edition with a starting price of $47240,
'
    'according to its website.',
    'date': '5 hours ago',
    'source': 'Bloomberg.com',
    'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?
q=tbn:ANd9GcTWWIC4VpMTfRvSyqiomODOoLg0xhoBf-Tc1qweKnSuaiTk-Y1wMJZM3jct0w&s',
    'position': 9}]]}
```

If you want to only receive news articles published in the last hour, you can do the following:

```
search = GoogleSerperAPIWrapper(type="news", tbs="qdr:h")
results = search.results("Tesla Inc.")
```

```
pprint.pprint(results)
```

```
{'searchParameters': {'q': 'Tesla Inc.',
                      'gl': 'us',
                      'hl': 'en',
                      'num': 10,
                      'type': 'news',
                      'tbs': 'qdr:h'},
 'news': [{}{'title': 'Oklahoma Gov. Stitt sees growing foreign interest in investments in ...',
            'link': 'https://www.reuters.com/world/us/oklahoma-gov-stitt-sees-growing-foreign-interest-investments-state-2023-05-04/',
            'snippet': 'T)), a battery supplier to electric vehicle maker Tesla '},
          {}{'title': "Inc (TSLA.O), said on Sunday it is considering building 'a battery plant in Oklahoma, its third in...",
            'date': '53 mins ago',
            'source': 'Reuters',
            'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcSSTcsXeenqmEKdiekvUgAmqIPR4nlAmgjTkBqLpza-1LfjX1CwB84MoNVj0Q&s',
            'position': 1},
          {}{'title': 'Ryder lanza solución llave en mano para vehículos eléctricos en EU',
            'link': 'https://www.tyt.com.mx/nota/ryder-lanza-solucion-llave-en-mano-para-vehiculos-electricos-en-eu',
            'snippet': 'Ryder System Inc. presentó RyderElectric+ TM como su '},
          {}{'title': 'nueva solución llave en mano ... Ryder también tiene ',
            'date': '56 mins ago',
            'source': 'Revista Transportes y Turismo',
            'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQJhXTQQtjSUZf9YPM235WQhFU5_d7lEA76zB8DGwZfixcfgf1_dhPJyKA1Nbw&s',
            'position': 2},
          {}{'title': '"I think people can get by with $999 million," Bernie Sanders tells American Billionaires.',
            'link': 'https://thebharatexpressnews.com/i-think-people-can-get-by-with-999-million-bernie-sanders-tells-american-billionaires-heres-how-the-ultra-rich-can-pay-less-income-tax-than-you-legally/',
            'snippet': 'The report noted that in 2007 and 2011, Amazon.com Inc. '},
          {}{'title': 'founder Jeff Bezos “did not pay a dime in federal
```

```

...
    'If you want to bet on Musk, check out Tesla.',  

    'date': '11 mins ago',  

    'source': 'THE BHARAT EXPRESS NEWS',  

    'imageUrl': 'https://encrypted-tbn0.gstatic.com/images?  

q=tbn:ANd9GcR_X9qqSwVFBBdos2CK5ky5IWIE3aJPCQeRYR901Jz4t-MjaEYBuwK7AU3AJQ&s',  

    'position': 3}]}

```

Some examples of the `tbs` parameter:

`qdr:h` (past hour) `qdr:d` (past day) `qdr:w` (past week) `qdr:m` (past month) `qdr:y` (past year)

You can specify intermediate time periods by adding a number: `qdr:h12` (past 12 hours) `qdr:d3` (past 3 days) `qdr:w2` (past 2 weeks) `qdr:m6` (past 6 months) `qdr:m2` (past 2 years)

For all supported filters simply go to [Google Search](#), search for something, click on "Tools", add your date filter and check the URL for "tbs=".

Searching for Google Places

We can also query Google Places using this wrapper. For example:

```

search = GoogleSerperAPIWrapper(type="places")
results = search.results("Italian restaurants in Upper East Side")
pprint.pprint(results)

```

```

{'searchParameters': {'q': 'Italian restaurants in Upper East Side',
                     'gl': 'us',
                     'hl': 'en',
                     'num': 10,
                     'type': 'places'},
 'places': [{}{'position': 1,
              'title': "L'Osteria",
              'address': '1219 Lexington Ave',
              'latitude': 40.77715459999996,
              'longitude': -73.9571363,
              'thumbnailUrl':
              'https://lh5.googleusercontent.com/p/AF1QipNjU7BWEq_aYQANBCbX52Kb01Dpd_1FIx5onw4
h92-n-k-no',
              'rating': 4.7,
              'ratingCount': 91,
              'category': 'Italian'}]
}

```

```
{'position': 2,
    'title': "Tony's Di Napoli",
    'address': '1081 3rd Ave',
    'latitude': 40.7643567,
    'longitude': -73.9642373,
    'thumbnailUrl':
'https://lh5.googleusercontent.com/p/AF1QipNbNv6jZkJ9nyVi60__8c1DQbe_eEbugRAhIYy
h92-n-k-no',
        'rating': 4.5,
        'ratingCount': 2265,
        'category': 'Italian'},
{'position': 3,
    'title': 'Caravaggio',
    'address': '23 E 74th St',
    'latitude': 40.773412799999996,
    'longitude': -73.96473379999999,
    'thumbnailUrl':
'https://lh5.googleusercontent.com/p/AF1QipPDGchokDvppoLfmVEo6X_bWd3Fz0HyxIHTe9
h92-n-k-no',
        'rating': 4.5,
        'ratingCount': 276,
        'category': 'Italian'},
{'position': 4,
    'title': 'Luna Rossa',
    'address': '347 E 85th St',
    'latitude': 40.77659399999996,
    'longitude': -73.950351,
    'thumbnailUrl':
'https://lh5.googleusercontent.com/p/AF1QipNPCpCPuqPAb1Mv6_fOP7cj8Wu1rbqbk2sMB1
h92-n-k-no',
        'rating': 4.5,
        'ratingCount': 140,
        'category': 'Italian'},
{'position': 5,
    'title': "Paola's",
    'address': '1361 Lexington Ave',
    'latitude': 40.7822019,
    'longitude': -73.9534096,
    'thumbnailUrl': 'https://lh5.googleusercontent.com/p/AF1QipPJr2
B6K-GNQa4koOTffggTePz8TKRTnWi3=w92-h92-n-k-no',
        'rating': 4.5,
        'ratingCount': 344,
        'category': 'Italian'},
{'position': 6,
    'title': 'Come Prima',
    'address': '903 Madison Ave',
    'latitude': 40.77212499999996,
```

```
'longitude': -73.965012,
'thumbnailUrl':
'https://lh5.googleusercontent.com/p/AF1QipNrX19G0NVdtDyMovCQ-M-m0c_gLmIxrdQAAbh92-n-k-no',
'rating': 4.5,
'ratingCount': 176,
'category': 'Italian'},
{'position': 7,
'title': 'Botte UES',
'address': '1606 1st Ave.',
'latitude': 40.7750785,
'longitude': -73.9504801,
'thumbnailUrl':

'https://lh5.googleusercontent.com/p/AF1QipPPN5GXxfH3NDacBc0Pt3uGAInd90ChS5isz9Rh92-n-k-no',
'rating': 4.4,
'ratingCount': 152,
'category': 'Italian'},
{'position': 8,
'title': 'Piccola Cucina Uptown',
'address': '106 E 60th St',
'latitude': 40.7632468,
'longitude': -73.9689825,
'thumbnailUrl':

'https://lh5.googleusercontent.com/p/AF1QipPifIgzOCD5SjgzzqBzGkdZCBp0MQsK5k7M7znh92-n-k-no',
'rating': 4.6,
'ratingCount': 941,
'category': 'Italian'},
{'position': 9,
'title': 'Pinocchio Restaurant',
'address': '300 E 92nd St',
'latitude': 40.781453299999995,
'longitude': -73.9486788,
'thumbnailUrl':

'https://lh5.googleusercontent.com/p/AF1QipNtxlIyEEJHtDtFtTR9nB38S8A2VyMu-mVVz72h92-n-k-no',
'rating': 4.5,
'ratingCount': 113,
'category': 'Italian'},
{'position': 10,
'title': 'Barbaresco',
'address': '843 Lexington Ave #1',
'latitude': 40.7654332,
'longitude': -73.9656873,
'thumbnailUrl':

'https://lh5.googleusercontent.com/p/AF1QipMb9FbPuXF_r9g5QseOHmReejxSHgSahPMPJ9-
```

```
h92-n-k-no',
    'rating': 4.3,
    'ratingCount': 122,
    'locationHint': 'In The Touraine',
    'category': 'Italian'}]}
```

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