

Multi LM agents: AutoGen

20250324

```
>>> user_proxy.initiate_chat(
...     assistant,
...     message="""What date is today? Which big tech stock has the largest year-to-date gain this year? How much is the gain?""",
... )
user_proxy (to assistant):
```

What date is today? Which big tech stock has the largest year-to-date gain this year? How much is the gain?

```
-----
assistant (to user_proxy):
```

To get the current date and find out which big tech stock has the largest year-to-date gain, we'll need to follow these steps:

1. Get today's date.
2. Fetch the year-to-date gains of major tech stocks.
3. Compare these gains to find the largest one.

First, let's get today's date using Python:

```
```python
filename: get_date_and_stock_gain.py
import datetime
import yfinance as yf

def get_current_date():
 return datetime.date.today()

def get_year_to_date_gain(ticker):
 stock = yf.Ticker(ticker)
 hist = stock.history(period="ytd")
 if not hist.empty:
 start_price = hist.iloc[0]['Close']
 end_price = hist.iloc[-1]['Close']
 gain = (end_price - start_price) / start_price * 100
 return gain
 else:
 return None

def main():
 current_date = get_current_date()
 print(f"Today's date is: {current_date}")

 # List of big tech stocks
 tech_stocks = ['AAPL', 'GOOG', 'MSFT', 'AMZN', 'FB']
 max_gain = 0
 best_performing_stock = ""

 for stock in tech_stocks:
 gain = get_year_to_date_gain(stock)
 if gain is not None and gain > max_gain:
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```

 max_gain = gain
 best_performing_stock = stock

 print(f"The big tech stock with the largest year-to-date gain is {best_performing_stock} with a gain of {max_gain:.2f}%")

if __name__ == "__main__":
 main()
...

```

Please execute this code to get the current date and the big tech stock with the largest year-to-date gain. The result will be printed out directly.

After you run this code, I'll help analyze the output if needed.

-----  
 Replying as user\_proxy. Provide feedback to assistant. Press enter to skip and use auto-reply, or type 'exit' to end the conversation:

>>>>>> NO HUMAN INPUT RECEIVED.

>>>>>> USING AUTO REPLY...

>>>>>> EXECUTING CODE BLOCK (inferred language is python)...  
 user\_proxy (to assistant):

exitcode: 0 (execution succeeded)

**Code output: \$FB: possibly delisted; no price data found** (period=ytd) (Yahoo error = "No data found, symbol may be delisted")

**Today's date is: 2025-03-28**

The big tech stock with the largest year-to-date gain is with a gain of 0.00%

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 [autogen.oai.client: 03-28 12:09:48] {351} WARNING - Model DeepSeek-R1-Q8\_0-00001-of-00020.gguf is not found. The cost will be 0. In your config\_list, add field {"price" : [prompt\_price\_per\_1k, completion\_token\_price\_per\_1k]} for customized pricing.  
 assistant (to user\_proxy):

It seems that the code encountered an issue with the stock ticker 'FB' (Facebook), which is possibly delisted, and thus no price data was found. Additionally, it appears that none of the other tech stocks had a gain calculated correctly, resulting in the best-performing stock being empty and the gain being 0.00%.

Let's modify the code to handle this situation better and to ensure we're getting valid data for our comparison:

```

```python
# filename: get_date_and_stock_gain.py
import datetime
import yfinance as yf

def get_current_date():
    return datetime.date.today()

def get_year_to_date_gain(ticker):
    stock = yf.Ticker(ticker)
    hist = stock.history(period="ytd")
    if not hist.empty:
        start_price = hist.iloc[0]['Close']

```

```

        end_price = hist.iloc[-1]['Close']
        gain = (end_price - start_price) / start_price * 100
        return gain
    else:
        return None

def main():
    current_date = get_current_date()
    print(f"Today's date is: {current_date}")

    # List of big tech stocks, replacing 'FB' with 'META' since Facebook is now listed under META
    tech_stocks = ['AAPL', 'GOOG', 'MSFT', 'AMZN', 'META']
    max_gain = float('-inf')
    best_performing_stock = ""

    for stock in tech_stocks:
        gain = get_year_to_date_gain(stock)
        if gain is not None:
            print(f"{stock} has a year-to-date gain of {gain:.2f}%")
            if gain > max_gain:
                max_gain = gain
                best_performing_stock = stock

    if best_performing_stock:
        print(f"The big tech stock with the largest year-to-date gain is {best_performing_stock} with a gain of {max_gain:.2f}%")
    else:
        print("No valid gain data found for the listed stocks.")

if __name__ == "__main__":
    main()
...

```

Please execute this modified code. It replaces 'FB' with 'META' (since Facebook's parent company, Meta Platforms, Inc., is listed under this ticker), and it also prints out the year-to-date gain for each stock that has valid data, making it easier to see which stocks are being compared.

After running this code, we should have a better understanding of the current market performance of these big tech stocks. If you encounter any further issues or have questions about the output, feel free to ask.

 Replying as user_proxy. Provide feedback to assistant. Press enter to skip and use auto-reply, or type 'exit' to end the conversation:

>>>>>>> NO HUMAN INPUT RECEIVED.

>>>>>>> USING AUTO REPLY...

>>>>>>> EXECUTING CODE BLOCK (inferred language is python)...
 user_proxy (to assistant):

exitcode: 0 (execution succeeded)

Code output: Today's date is: 2025-03-28

AAPL has a year-to-date gain of -9.92%

GOOG has a year-to-date gain of -16.75%

MSFT has a year-to-date gain of -8.63%

AMZN has a year-to-date gain of -12.08%

META has a year-to-date gain of -2.31%

The big tech stock with the largest year-to-date gain is META with a gain of -2.31%

[autogen.oai.client: 03-28 12:10:44] {351} WARNING - Model DeepSeek-R1-Q8_0-00001-of-00020.gguf is not found. The cost will be 0. In your config_list, add field {"price" : [prompt_price_per_1k, completion_token_price_per_1k]} for customized pricing.
assistant (to user_proxy):

Based on the output, it appears that all of the big tech stocks listed ('AAPL', 'GOOG', 'MSFT', 'AMZN', 'META') have experienced a year-to-date loss as of March 28, 2025. The losses range from -2.31% for 'META' to -16.75% for 'GOOG'.

Since 'META' has the smallest loss among these stocks, it is considered the best-performing stock in this context, with a year-to-date "gain" of -2.31%, meaning it has lost the least amount of value compared to the others.

To summarize:

- Today's date: March 28, 2025
- The big tech stock with the largest year-to-date gain (smallest loss): META
- Year-to-date gain (loss) for META: -2.31%

Given that all stocks have experienced losses, this indicates a challenging market environment for these big tech companies as of the given date.

TERMINATE

Replying as user_proxy. Provide feedback to assistant. Press enter to skip and use auto-reply, or type 'exit' to end the conversation:

>>>>>> NO HUMAN INPUT RECEIVED.

>>>>>> USING AUTO REPLY...
user_proxy (to assistant):

[autogen.oai.client: 03-28 12:11:03] {351} WARNING - Model DeepSeek-R1-Q8_0-00001-of-00020.gguf is not found. The cost will be 0. In your config_list, add field {"price" : [prompt_price_per_1k, completion_token_price_per_1k]} for customized pricing.
assistant (to user_proxy):

TERMINATE

Replying as user_proxy. Provide feedback to assistant. Press enter to skip and use auto-reply, or type 'exit' to end the conversation:

>>>>>> NO HUMAN INPUT RECEIVED.

```

ChatResult(chat_id=None, chat_history=[{'content': 'What date is today? Which big tech stock has the largest year-to-date gain this year? How much is the gain?', 'role': 'assistant', 'name': 'user_proxy'}, {'content': 'To get the current date and find out which big tech stock has the largest year-to-date gain, we\'ll need to follow these steps:\n\n1. Get today\'s date.\n2. Fetch the year-to-date gains of major tech stocks.\n3. Compare these gains to find the largest one.\n\nFirst, let\'s get today\'s date using Python:\n\n```\npython\n# filename: get_date_and_stock_gain.py\nimport datetime\nimport yfinance as yf\n\ndef get_current_date():\n    return datetime.date.today()\n\ndef get_year_to_date_gain(ticker):\n    stock = yf.Ticker(ticker)\n    hist = stock.history(period="ytd")\n    if not hist.empty:\n        start_price = hist.iloc[0]['Close']\n        end_price = hist.iloc[-1]['Close']\n        gain = (end_price - start_price) / start_price * 100\n        return gain\n    else:\n        return None\n\ndef main():\n    current_date = get_current_date()\n    print(f"Today\'s date is: {current_date}")\n    \n    # List of big tech stocks\n    tech_stocks = ['AAPL', 'GOOG', 'MSFT', 'AMZN', 'FB']\n    max_gain = 0\n    best_performing_stock = ""\n    \n    for stock in tech_stocks:\n        gain = get_year_to_date_gain(stock)\n        if gain is not None and gain > max_gain:\n            max_gain = gain\n            best_performing_stock = stock\n    \n    print(f"The big tech stock with the largest year-to-date gain is {best_performing_stock} with a gain of {max_gain:.2f}%")\n    \n    if __name__ == "__main__":\n        main()\n\n```\n\nPlease execute this code to get the current date and the big tech stock with the largest year-to-date gain. The result will be printed out directly.\n\nAfter you run this code, I\'ll help analyze the output if needed.', 'role': 'user', 'name': 'assistant'}, {'content': 'exitcode: 0 (execution succeeded)\nCode output: $FB: possibly delisted; no price data found (period=ytd) (Yahoo error = "No data found, symbol may be delisted")\nToday\'s date is: 2025-03-28\nThe big tech stock with the largest year-to-date gain is  with a gain of 0.00%', 'role': 'assistant', 'name': 'user_proxy'}, {'content': 'It seems that the code encountered an issue with the stock ticker \'FB\' (Facebook), which is possibly delisted, and thus no price data was found. 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It replaces \'FB\' with \'META\' (since Facebook\'s parent company, Meta Platforms, Inc., is listed under this ticker), and it also prints out the year-to-date gain for each stock that has valid data, making it easier to see which stocks are being compared.\n\nAfter running this code, we should have a better understanding of the current market performance of these big tech stocks. 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The losses range from -2.31% for \'META\' to -16.75% for \'GOOG\'.\n\nSince \'META\' has the smallest loss among these stocks, it is considered the best-performing stock in this context, with a year-to-date "gain" of -2.31%, meaning it has lost the least amount of value compared to the others.\n\nTo summarize:\n\n- Today\'s date: March 28, 2025\n- The big tech stock with the largest year-to-date gain (smallest loss): META\n- Year-to-date gain (loss) for META: -2.31%\n\nGiven that all stocks have experienced losses, this indicates a challenging market environment for these big tech companies as of the given date.', 'role': 'user', 'name': 'assistant'}, {'content': '', 'role': 'assistant', 'name': 'user_proxy'}, {'content': 'TERMINATE', 'role': 'user', 'name': 'assistant'}], summary='', cost={'usage_including_cached_inference': {'total_cost': 0, 'DeepSeek-R1-Q8_0-00001-of-00020.gguf': {'cost': 0, 'prompt_tokens': 16783, 'completion_tokens': 2803, 'total_tokens': 19586}}, 'usage_excluding_cached_inference': {'total_cost': 0, 'DeepSeek-R1-Q8_0-00001-of-00020.gguf': {'cost': 0, 'prompt_tokens': 16262, 'completion_tokens': 2407, 'total_tokens': 18669}}}, human_input=['', '', '', ''])
>>>

```