

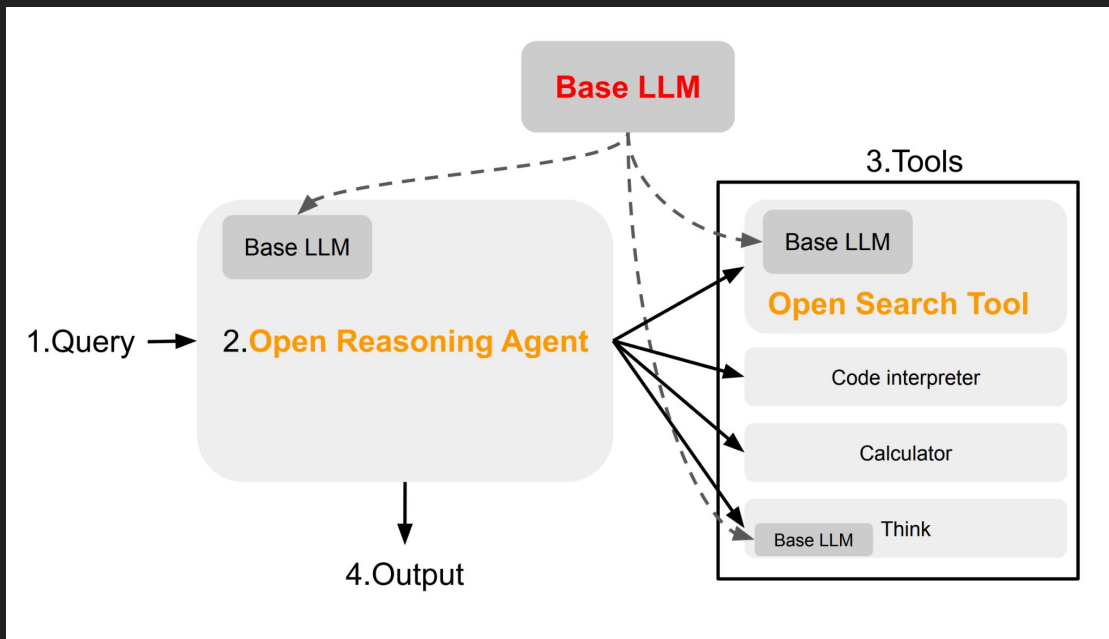
# Improving Open Deep Search

Sentient AGI

Datathon 2025

# Angles of Attack

- Structured information retrieval from the web
- Majority voting to leverage variance in responses
- Advanced planning before entering answer mode
- Additional minor improvements



# Structured Information Retrieval

**Frames Question:** Imagine there is a building called Bronte tower whose height in feet is the same number as the dewey decimal classification for the Charlotte Bronte book that was published in 1847. Where would this building rank among tallest buildings in New York City, as of August 2024?

ODS only returns top 5 buildings even though the queried article contains a sufficiently long list (the true answer is the 37th)!

1. One World Trade Center - 1,776 feet
2. Central Park Tower - 1,550 feet
3. 111 West 57th Street - 1,428 feet
4. One57 - 1,005 feet
5. 432 Park Avenue - 1,396 feet

vs

Rank	Name	Height (ft)	Completion Date
1	One World Trade Center	1,776	2014
2	Central Park Tower	1,550	2021
3	111 West 57th Street	1,428	2021
4	One57	1,005	2016
5	432 Park Avenue	1,396	2015
6	30 Hudson Yards	1,275	2019
7	270 Park Avenue	1,250	2022
8	250 West 25th Street	1,230	2023
9	200 West 25th Street	1,210	2023
10	200 West 25th Street	1,210	2023

➡ We built a tool extracting structured information from queried pages and returning them if useful.

# Majority Voting

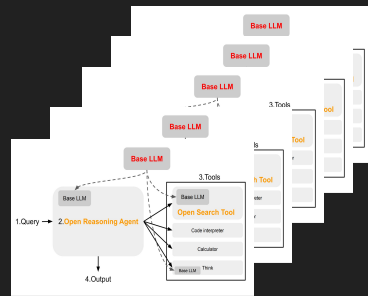
Frames Question: An Australian artist, born the same year as artist Janet Cumberae Stewart and fellow member of the Melbourne Society of Women Painters and Sculptors, had her painting featured on the cover of Women's World Magazine in 1923. What is the name of the painting?

Running ODS 5 times:

answers: "Under the Window"  
"Reve d'Or"  
"The information is not available"  
"Reve d'Or"  
"Cover art with a circus theme"



Solution: Majority Voting!



answer: Reve d'Or

# Additional Improvements

- Planning step before starting the search
- Processing sources sequentially by trustworthiness:

Answer Box => Wikipedia => Aggregated Sources => Top News Articles

- Hyperparameter adjustments: E.g. allow larger fractions to be extracted from sources

