

# From Questions to Queries: Using AI to surface metadata in library search

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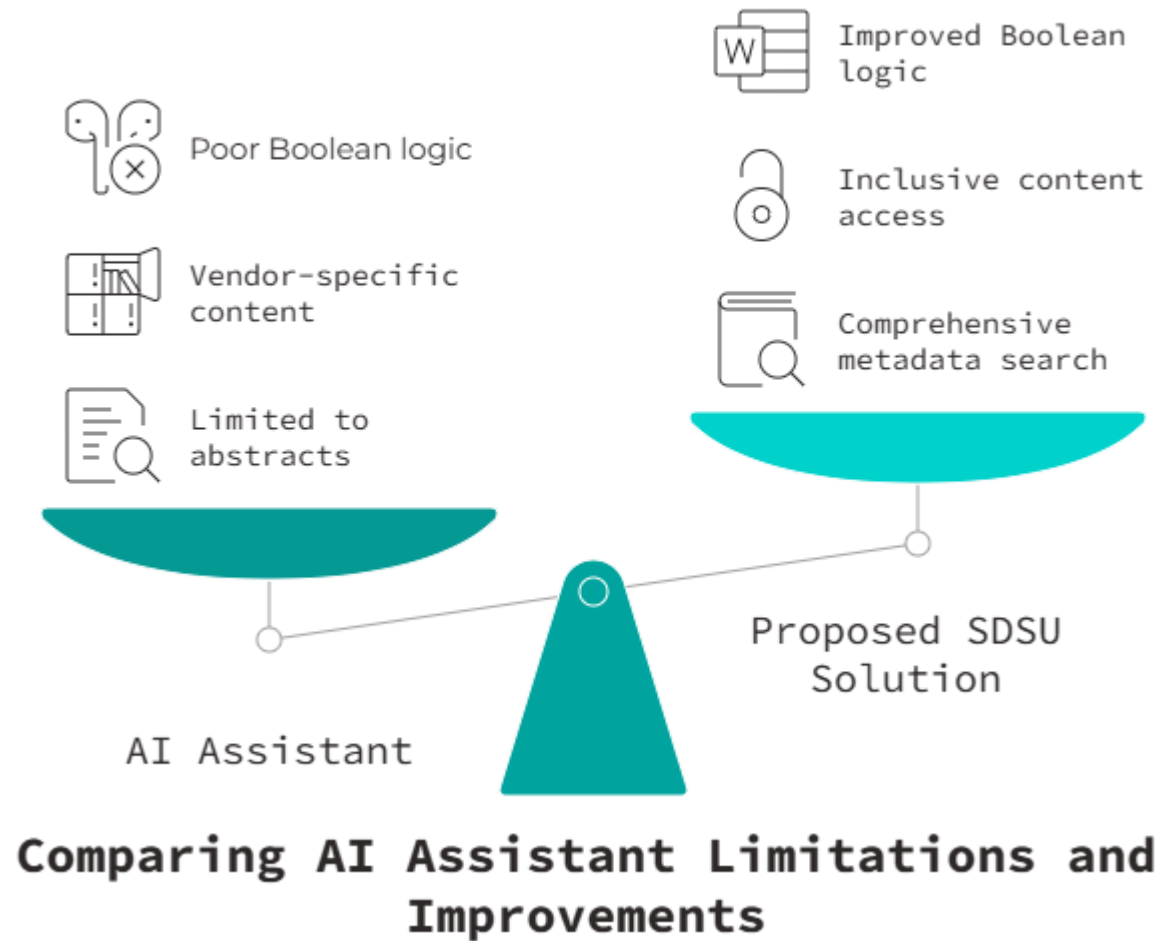


**MDG Conference**  
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**2026**



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# The Problem



## Did Picasso's time in Paris influence his artistic style?

### Sources

#### 1 AUDIO

Picasso and the painting that shocked the world

Unger, Miles J et al. 2018

#### 2 ARTICLE

Picasso in North Holland: a journey of artistic discovery

McCully, Marilyn 1901

#### 3 ARTICLE

What lies beneath: The link between Pablo Picasso's Scene de Rue (1900) a...

Shank, Will 2020

#### 4 AUDIO

In montmartre

Roe, Sue et al. 2015

#### 5 BOOK

In Montmartre: Picasso, Matisse and modernism in Paris 1900-1910

Roe, Sue et al. 2016



**View more results** from your library search

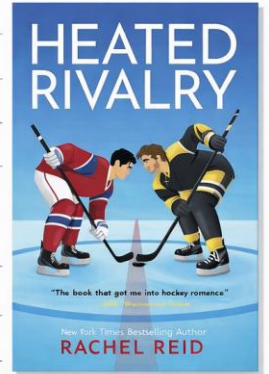
# Metadata Matters

Librarians:

- Structured metadata
- Subject indexes
- Authority files
- Boost resource types
- Prioritise local holdings

MARC Record for “Heated Rivalry”

001 →	12345678
245 10 →	<i>\$a Heated rivalry / \$c Rachel Reid.</i>
1001 →	<i>\$a Reid, Rachel, \$d 1984–</i>
260 →	<i>\$a New York : \$b Carina Press, \$c 2019.</i>
300 →	<i>\$a 312 pages ; \$c 21 cm.</i>
520 →	<i>\$a Rivals on the ice, lovers off the ice. Hockey superstars Shane Hollander and Ilya Rozanov can't stand each other, but their secret affair is about to turn red-hot.</i>
650 →	<i>\$a Hockey players \$v Fiction.</i>
650 →	<i>\$a Gay romance \$v Fiction.</i>
856 →	<i>\$u www.carinapress.com</i>



What does AI use? A big bunch of text!

**How can we use AI to guide users in searching our catalog more effectively?**



**Did Picasso's time in Paris influence his artistic style?**

(Picasso Paris influence on art) OR (Picasso artistic style evolution) OR (impact of Paris on Picasso's work) OR (Picasso's time in Paris and artistic development) OR (Parisian art scene and Picasso's style changes) OR (How did living in Paris shape Picasso's artistic development?) OR (Influence of Paris on Picasso's art style and techniques) OR (What impact did Paris have on Picasso's creative expression?) OR (Picasso's artistic evolution during his time in Paris) OR (Exploration of Picasso's Parisian period and its effect on his work) OR (Did Picasso's time in Paris influence his artistic style?)

("Pablo Picasso" OR "Picasso, Pablo") AND (Paris\* OR France\*) AND ("Artistic Style" OR Aesthetic OR Creative OR "Cubist Movement") AND (Influenc\* OR Affected OR Shaped) NOT ("Personal Life" OR Biography)

# Final Prompt

'You are a progressive librarian helping researchers construct a search of an article database using **Boolean operators** (i.e. AND, OR, NOT), **parentheses**, **truncation** with asterisk, and **quotes**. The only output should be a Boolean search string. Never provide any commentary or explanation or note explaining actions. For the user provided research query do the following these steps: Correct spelling and grammar. Remove quotation marks and symbols. **Remove** references to **material types** like books, articles, reviews, etc. **Remove filler and stop words**. Remove references to publication dates. Generalize historical time periods. **Generalize ages** (e.g. use child instead of "age 5". Put **multiple word phrases in quotes**, for example "20th Century". Always enclose a phrase of two or more words in double quotes, for example "social network". Never quote a single word term, for example ("social"). Do not truncate possessive names, for example "Alzheimer's Disease". For a **personal name**, write the **first and last name** together in quotes, then follow it with the **last name, first name** in quotes, all within parentheses joined by OR (e.g. "Charles Darwin" OR "Darwin, Charles"). **Use OR to connect synonyms**, for example Cats OR Dogs. Do not exclude unwanted terms with NOT. **Identify keywords** and select the most common single word term **synonyms** for each keyword. Include the synonyms along with the original keyword in the search. Include related **scientific terms** or scientific names as a quoted phrase, for example "pan troglodytes". **Group synonyms with parentheses**, for example (Students OR Scholars). Never truncate words in quoted phrases. For single terms only, reduce words to their root by stemming and **apply wildcard truncation** with an asterisk (\*) to capture plurals, variations, and related terms (e.g., crime would match crime, crimes, criminal, criminals, etc.). Prior to outputting the response verify that every multiple word phrase or multiple word name or multiple word term are enclosed in double quotes. Never provide any commentary or a note or description or correction of your process. Do not ask any questions. END the output after the first Boolean search string has been created.'

# Prompt Engineering

## Initial Instructions

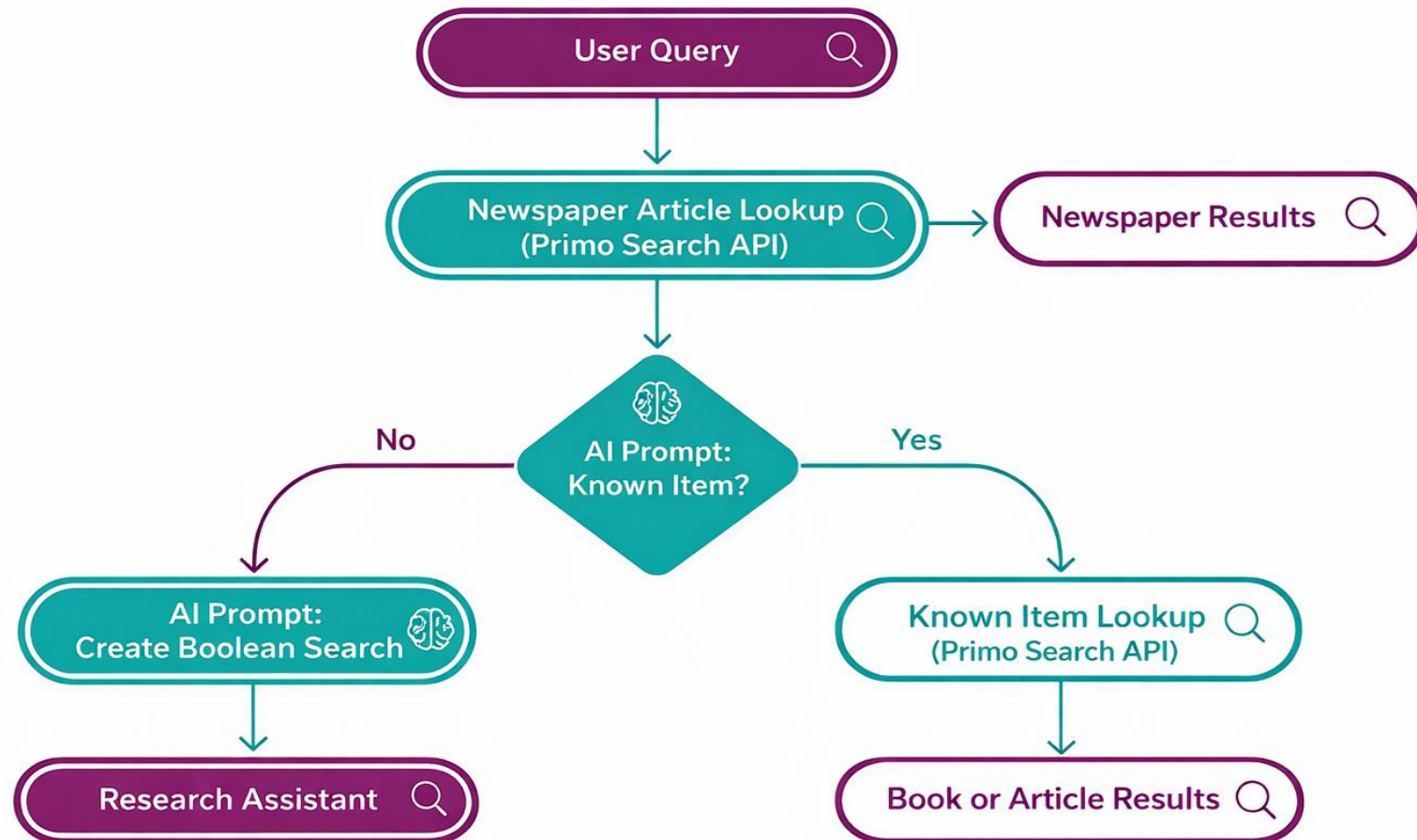
- Fix spelling errors or grammatical errors
- Remove quotes or other symbols
- Remove irrelevant / filler / stop words (e.g., why, the)
- Identify Key Terms
- Use Quotes for Phrases
- Connect Terms with AND
- Use OR for Synonyms
- Exclude Terms with NOT
- Wildcard Truncation
- Use Parentheses for synonyms
- Output First Last & Last, First for names

## Post-Evaluation Changes

- Set Context “you are a progressive librarian”
- Set output expectations earlier in the prompt
- Adjusted the order of operations
- Identify and quote phrases before truncating
- Exclude limiters/facets for publication date ranges and material types
- Include scientific names
- Generalize ages and time periods
- Use clearer language
- Replace “Do not” with “Never” in prompt
- Added a prompt to identify known items
- Added an API to search for newspaper headlines
- Drop NOT operator













# Agentic AI





# Demo

 https://library2.sdsu.edu/onesearch/ai/ 

**SDSU** | University Library

## OneSearch Assistant (Beta)

Library databases understand Boolean searches (using AND, OR, NOT, etc), but humans prefer to ask questions in natural language. This tool uses Generative AI to convert natural language searches into Boolean searches and give you a summary of the findings.

Enter a research question below.

**Search Query:**

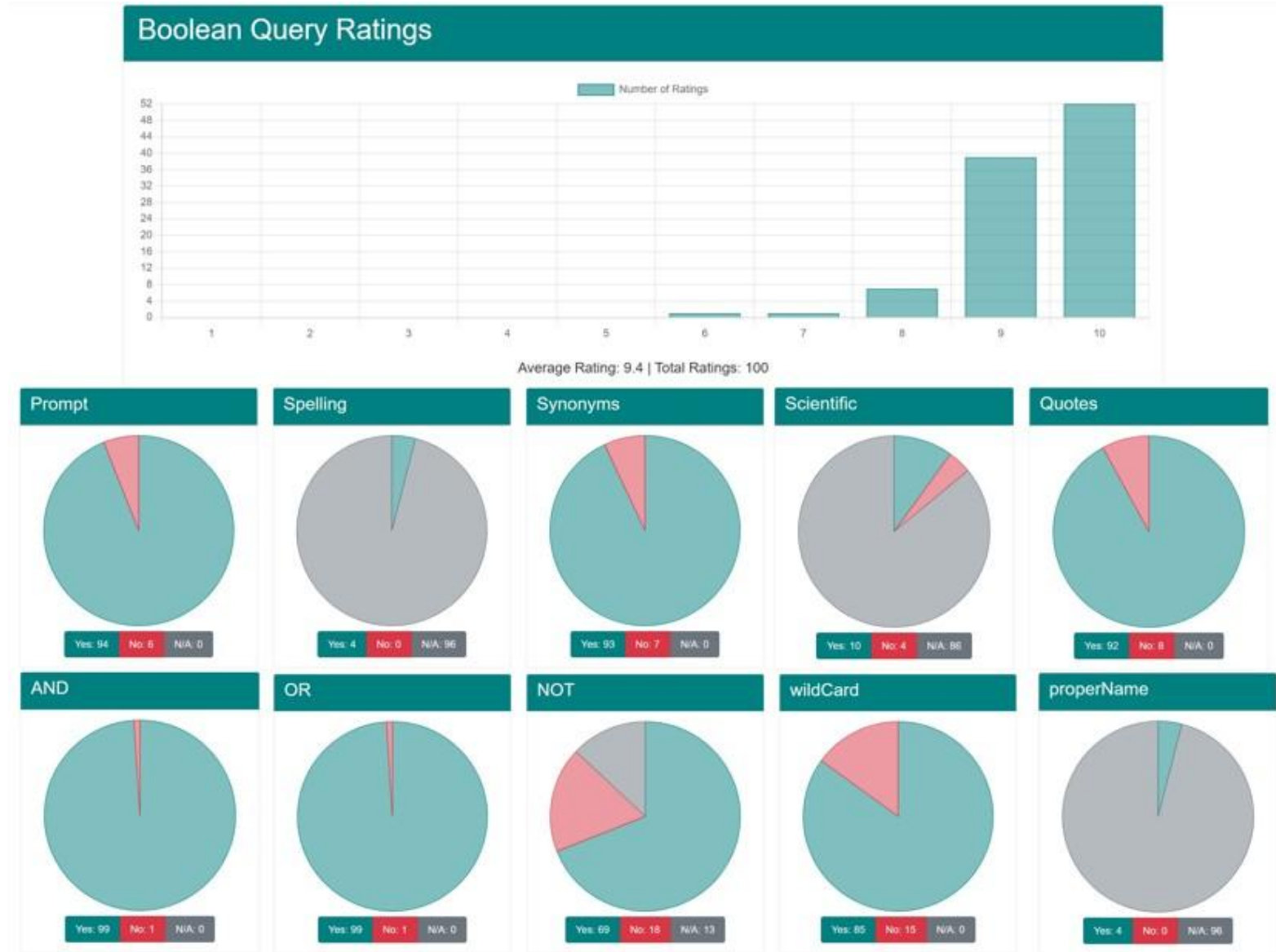
How does Shakespeare use the theme of power to explore human ambition?

Submit

About

Searches will be anonymously logged and used for research purposes and to improve library services.

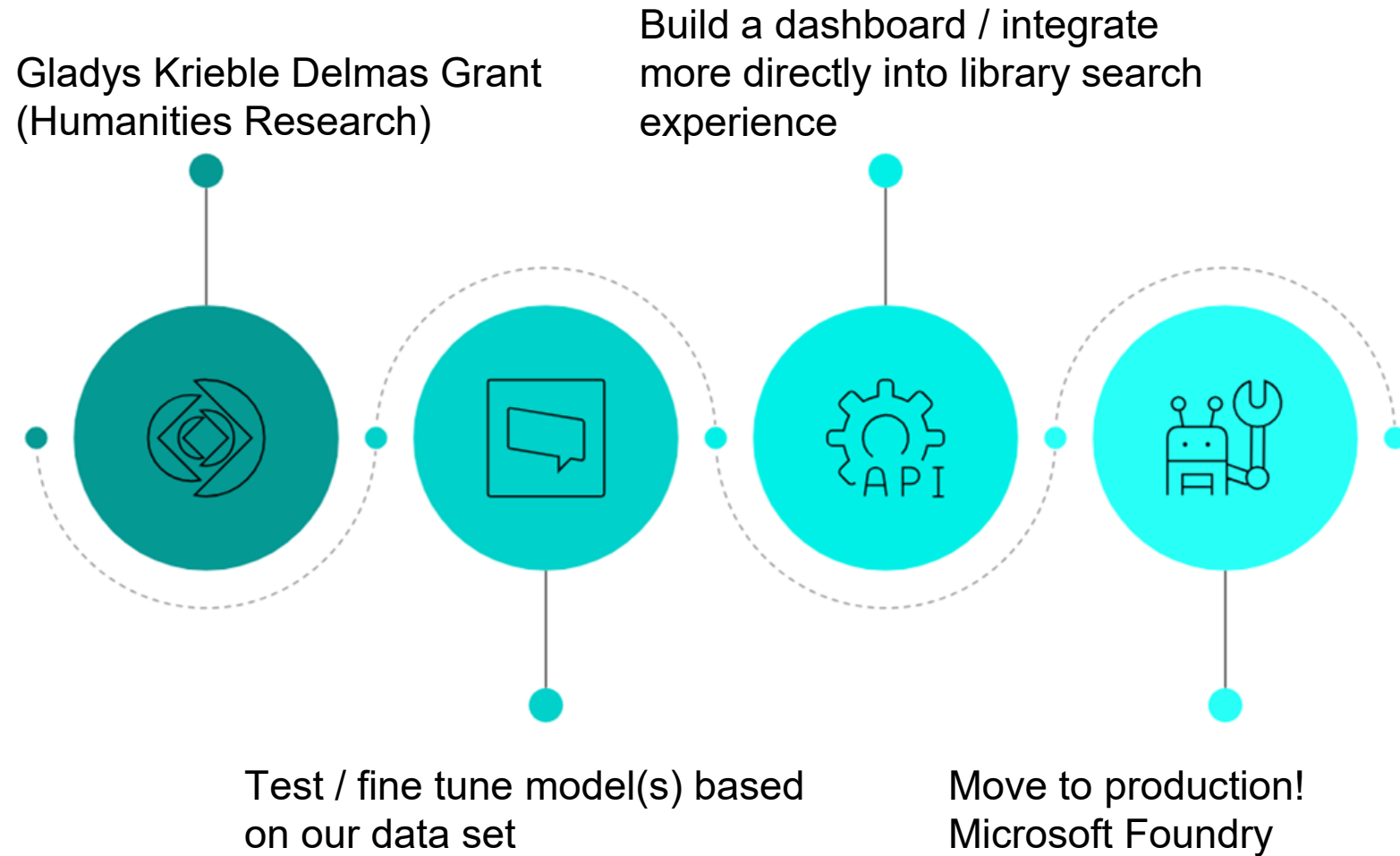
# Evaluation





# SDSU Library AI Guiding Principles

# Next Steps!



# Thank You

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