

AI Tools for Literature Search: An Overview

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Background and Disclaimer

Since the field of “Literature Search with AI” is very dynamic, the information presented here may be outdated rather quickly. The present overview was **last revised in November 2024**. Our site on [AI for Academic Research](#) on the website of Tübingen University Library is being updated constantly. There, you will always find the newest versions of our documents.

The evaluation of the tools is based exclusively on the personal assessment of the AI team which is part of the “Information Department” of Tübingen University Library.

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Please feel free to contact information@ub.uni-tuebingen.de in case you have any questions.

Finders

Introduction

The AI-based tools that we call “Finders” are designed for academic literature search. Unlike chatbots like, for example, ChatGPT, Gemini, Claude, or MS Copilot, these exclusively source their information from academic databases.

At the moment, these tools are most suited for finding **English Open Access papers** in the field of **Medicine or the Natural Sciences**.

Currently, these tools still run into problems when trying to find **non-English monographs** that are **behind a paywall** and/or that belong to **the Humanities, Social Sciences, Divinity or Law**.

Overview: Underlying Database(s) – Privacy – Cost

Tool	Database(s)	Comment on the Database(s)	Privacy	Requires login to use?	Comment on Privacy	Cost	Comment on the Cost
Consensus	Semantic Scholar		No focus on privacy	Yes	Privacy policy	Free and premium versions	Still useful with a free account
Elicit	Semantic Scholar		No focus on privacy	Yes	Privacy policy	Free and premium versions	Still useful with a free account
Keenious	OpenAlex	In theory more suited for finding monographs than other tools, but it still mostly finds journal articles.	No focus on privacy	No	Privacy policy	Free and premium versions	Still useful with a free account
ORKGAsk	CORE	Only finds Open Access publications Indexes many university repositories	Privacy-friendly	No	Developed by TIB Hannover; focus on data protection (source)	Free	
Perplexity	Unclear	Currently not suited for academic research	No focus on privacy	Yes	Privacy policy	Free and premium versions	Not suited for academic research in general currently
SciSpace	Unclear – probably Semantic Scholar & DOAB & DOAJ ?	More suited for finding (Open Access) monographs than other tools	No focus on privacy	No	Users' searches are publicly visible! Privacy policy	Free and premium versions	Still useful with a free account

Semantic Scholar	See data sources here	Focus on journal articles	No focus on privacy	No	Privacy policy	Free	
Undermind	Semantic Scholar		No focus on privacy	Yes	Privacy policy	Free and premium versions	Practically useless with a free account
EvidenceHunt	PubMed	Only for medicine	No focus on privacy	Search: no; Chat: yes	Privacy policy	Free and premium versions	Still useful with a free account

Individual Tools

Consensus

<https://consensus.app/>

Description	Search engine that uses a fine-tuned language model to extract “ <u>key takeaways</u> ” from papers. The takeaways are tailored to the individual user request and influence the ranking of the papers.
Database	Semantic Scholar
Suited for	All academic inquiries, also works relatively well for non-STEM subjects.
Limitations	general limitations of Semantic Scholar; some special features more suited for natural sci. and medicine.
Filters	year, Open Access, minimum citations, methods used in paper, journal rank, subject area, country
Cost	Free (most functions); Premium (unlimited GPT4 summaries, Consensus Meters and Study Snapshots, also: Bookmarks and Lists).
Other features	<u>GPT4 summaries</u> of papers, <u>Consensus Meters</u> for yes/no questions, Study Snapshots (population, sample size, methods, outcomes), <u>Consensus Copilot</u> , export in CSV or RIS, can be integrated with <u>Zotero</u> .
Comments	Better avoid keywords but rather type in full questions. <u>Tips for searching</u> .

Elicit

<https://elicit.com>

Description	Search tool that uses the abstract of a paper (or the full paper, if OA) for ranking and summarising results.
Database	Semantic Scholar; want to add more sources soon; more info here .
Suited for	Best works for papers that have a detailed abstract or for Open Access papers; also works relatively well for non-STEM subjects.
Limitations	Finding closed-access papers without an abstract; general limitations of Semantic Scholar; languages other than English.
Filters	pdf available, year, study type, keywords (not) in the abstracts, different ranking methods.
Cost	Free (unlimited searches, limited versions of premium features); Plus (various premium features; export; high-accuracy mode); Pro (extract data from 1,200 papers/year; unlimited high-accuracy). More info here .
Other features	Upload pdfs and analyze them. "List of Concepts" (helpful for searching methods, datasets and the same concept across different subjects).
Comments	Better avoid keywords but rather type in full questions. FAQ here .

Keenious

<https://keenious.com/>

Description	Upload your current document or a pdf from your field to see papers that are related to the topic. (But also works with (longer) typed-in questions.) More information here .
Database	OpenAlex (for its sources, see here).
Suited for	Researchers who already have started writing their paper. Works best for papers in English.
Limitations	Finding papers without abstracts (since the keenious search relies on titles and abstracts). [Information on the website is a bit vague overall, so it's hard to evaluate.]
Filters	Year, citation count, Open Access.
Cost	Free; Plus (top 1000 results, unlimited document length, cross-language search, bulk export). More info .
Other features	Can be linked to Word or GoogleDoc file. Highlight text in your file to only search for this specific concept/topic.
Comments	Works best if you already have a longer document → The more input the better.

Perplexity

<https://www.perplexity.ai/>

Description	Not specifically designed for academic research, but you can choose "Focus Academic" which, however, sometimes works less well than "Focus All."
Database	Unclear.
Suited for	General (non-academic) inquiries.
Limitations	Not suited for in-depth literature search. Hallucinates often.
Filters	None, apart from general filters like „Focus Academic“.
Cost	Free and Premium (unlimited quick searches, attach and analyze images and files, access to GPT-4o, Claude-3, Sonar Large (LLama 3.1)) More information here .
Other features	Copilot (only for registered users): asks questions about your query to better tailor the results to your needs.
Comments	!!!We don't recommend it for academic research at the moment!!!

ORKGAsk

<https://ask.orkg.org/>

Description	“ORKG Ask is a scholarly search and exploration system powered by Vector Search, Large Language Models and Knowledge Graphs” (Source)
Database	<u>CORE</u> → only Open Access publications; many university repositories
Suited for	All subject areas, but works better for STEM fields.
Limitations	May not find paywalled publications
Filters	Year; language; impact; citation count; title; abstract; publisher; author; topic
Cost	Free
Other features	Presents results in a table to give users an overview on methods, results, key insights, etc.
Comments	Better avoid keywords but rather type in full questions. For the FAQ, see here . ORKAsk is Open Source and privacy-friendly.

SciSpace

<https://typeset.io/>

Description	All-in-one platform (searching, analyzing, publishing papers, AI detection, plagiarism check, host journals).
Database	Unclear – probably Semantic Scholar and Directory of Open Access Books/Journals ("200 million+ papers and 50 million+ Open Access full-text PDFs" Source).
Suited for	All academic inquiries, also works relatively well for non-STEM subjects; also works well for OA books.
Limitations	Has similar (though fewer) limitations as all tools that use Semantic Scholar as their database.
Filters	PDF available, Open Access, top tier papers, year, publication type, keywords, journals.
Cost	Free; Premium (unlimited searches, paraphrases & citation generations; export). More information .
Other features	See above: all-in-one platform.
Comments	Better avoid keywords but rather type in full questions.

Semantic Scholar

<https://www.semanticscholar.org/>

Description	Helps researchers quickly find and analyze papers.
Database	More than 220 million papers (see slide at the beginning)
Suited for	Papers in English; all fields of research but especially STEM.
Limitations	No focus on books, datasets, or patents; also no focus on languages other than English.
Filters	Field of study, year, pdf available, author, journal/conference, different rankings.
Cost	Free
Other features	Personal library, alerts, AI-generated summaries (currently only for computer science and biomedicine).
Comments	Very helpful FAQ page ; much more honest about its limitations than other AI tools.

Undermind

<https://www.undermind.ai>

Description	Uses a complex, four-stage search algorithm: 1. find potentially relevant papers, 2. relevance classification, 3. based on these results: adjust search and search again, 4. calculate when (almost) all relevant papers have been found and the search can conclude. More information here .
Database	Semantic Scholar
Suited for	all subjects (despite the reliance on Semantic Scholar, it generally yielded good results when we tried non-STEM queries)
Limitations	general limitations of Semantic Scholar
Filters	Results of the fast few years, minimum citations → few filters at the moment
Cost	Free (limited number of searches and results); Premium (unlimited Deep Searches; expand search results, export in RIS and BIB; early access to new features)
Other features	Summaries of results; narrowing down the results according to their topic; expanding the results
Comments	You can type in quite detailed questions (also: what do I <i>*not*</i> want to find).

Evidence Hunt

<https://evidencehunt.com/browse>

Description	AI research tool for medicine
Database	PubMed
Suited for	medicine and related subjects
Limitations	not suited for other subjects (during our tests, it didn't work great for medicine either)
Filters	study type; discipline; only last week's publications; also: search boxes for PICO analysis (Population, Intervention, Comparison, and Outcome)
Cost	Free (search); Premium (more filters; more publications; better ranking mechanism; etc.)
Other features	Summaries and answers based on all results
Comments	The added value compared to PubMed itself is very limited at the moment.

Connectors

Introduction

The AI search tools that we call “Connectors” create interactive visual networks based on bibliographic and thematic relationships between publications. To use these tools, you feed in a “seed paper” – this seed paper is a relevant publication on your research topic that you have already found. We recommend entering a [Persistent Identifier](#) of your seed paper (e.g. its DOI or PubMedID) into the tool. In many cases, however, the tools also allow you to search for other metadata belonging to your seed paper (e.g. its author or title). The Connector will then show you publications that are in some way related to the seed paper (citing, cited by, thematically similar).

Overview: Underlying Database(s) – Privacy – Cost

Tool	Database(s)	Comment on the Database(s)	Privacy	Requires login to use?	Comment on privacy	Cost	Comment
Connected Papers	Semantic Scholar		No focus on privacy	No	Privacy policy	Free and premium versions	Still useful with a free account
LitMaps	Crossref Semantic Scholar OpenAlex	Almost any publication that has a DOI is findable via Crossref.	No focus on privacy	No, but most features are only available to registered users.	Privacy policy	Free and premium versions	Still useful with a free account
Open Knowledge Maps	PubMed BASE OpenAIRE		Focus on privacy	No	Privacy policy	Free	
ResearchRabbit	PubMed Semantic Scholar		No focus on privacy	Yes	Privacy policy	Free	

Individual Tools

Connected Papers

<https://www.connectedpapers.com/>

Description	„Connected Papers is a [...] visual tool to help researchers and applied scientists find and explore papers relevant to their field of work” (Source). Search by keyword or provide a 'seed paper' by entering the DOI, and the tool will provide a visual map of other related papers (by topic or reference).
Database	Semantic Scholar
Suited for	Literature search
Limitations	Not suited for finding older literature that doesn't have an identifier (e.g. a DOI), nor for literature that doesn't have a lot of metadata.
Filters	PDF available, Open access, year, derivative works, prior works.
Cost	Free (5 graphs per month, all features included). Academic (Unlimited graphs, all features included). More info .
Other features	View the results as a graph or as a list. Citation count available.
Comments	Search by keywords, paper, title, DOI or another identifier. Better results when searching with articles (seed papers that have a DOI) than with keywords.

Litmaps

<https://www.litmaps.com/>

Description	Litmaps recommends papers based on an initial starting article. Search for your topic, select an article, and Litmaps will find relevant articles based on thematic or bibliographic connections.
Database	260+ million papers from Crossref, Semantic Scholar, and OpenAlex. (Source)
Suited for	Literature search, literature management, staying up-to-date on the latest research, collaborating.
Limitations	Not suited for finding older literature that doesn't have an identifier (e.g. a DOI), nor for literature that doesn't have a lot of metadata.
Filters	Year, author, keywords, data range, timeline.
Cost	Free: Search up to 20 inputs, 100 articles, 1 Litmap. Pro: (configurable weekly literature alerts, basic + advanced unlimited inputs, unlimited articles, unlimited Litmaps). Offers also a cost plan for teams with additional collaboration feature. More info .
Other features	Organize articles into collections. Find more related articles with "Discover search". Save searches, export and share findings, sign up for email alerts to be notified when new articles on your topic are published. Citation count available.
Comments	Search by keyword, author, DOI, Pubmed ID or arXiv ID. Better results when searching with articles (seed papers that have a DOI) than with keywords.

Open Knowledge Maps

<https://openknowledgemaps.org/>

Description	"[K]nowledge maps provide an instant overview of a topic by showing the main areas at a glance, and documents related to each area" (Source).
Database	PubMed (life sciences) or BASE (all disciplines), OpenAIRE.
Suited for	Literature search.
Limitations	Not suited for finding older literature that doesn't have an identifier (e.g. a DOI), nor for literature that doesn't have a lot of metadata.
Filters	Open Access, relevance, author, title, Year, document type, metadata quality.
Cost	Free.
Other features	Provides full text PDF for Open access articles. Export with BibTeX.
Comments	Uses the top 100 documents related to a topic to create a map. Find FAQs here . Find training materials here .

Research Rabbit

<https://www.researchrabbit.ai/>

Description	ResearchRabbit is a citation-based literature mapping tool.
Database	PubMed (biomedical and life sciences); Semantic Scholar (all other subjects)
Suited for	Literature search, staying up to date on the latest research, collaborating.
Limitations	Not suited for finding older literature that doesn't have an identifier (e.g. a DOI), nor for literature that doesn't have a lot of metadata.
Filters	Author (discover author networks), recency, year, timeline.
Cost	"Free forever for researchers."
Other features	Personalized alerts on new papers in your field. Creates personalized collections of paper recommendations. Share & collaborate. Zotero integration. Export papers with BibTeX, RIS, CSV. Citation count.
Comments	Search papers by title, DOI, PMID, or keywords, or upload a file (BibTeX, RIS). Better results when searching with articles (seed papers that have a DOI) than with keywords.