



International College of Economics and
Finance

Applied seminar «Quantitative
analysis»

Moscow, 2025

Basic and AI Instruments for Paper Search and Analysis

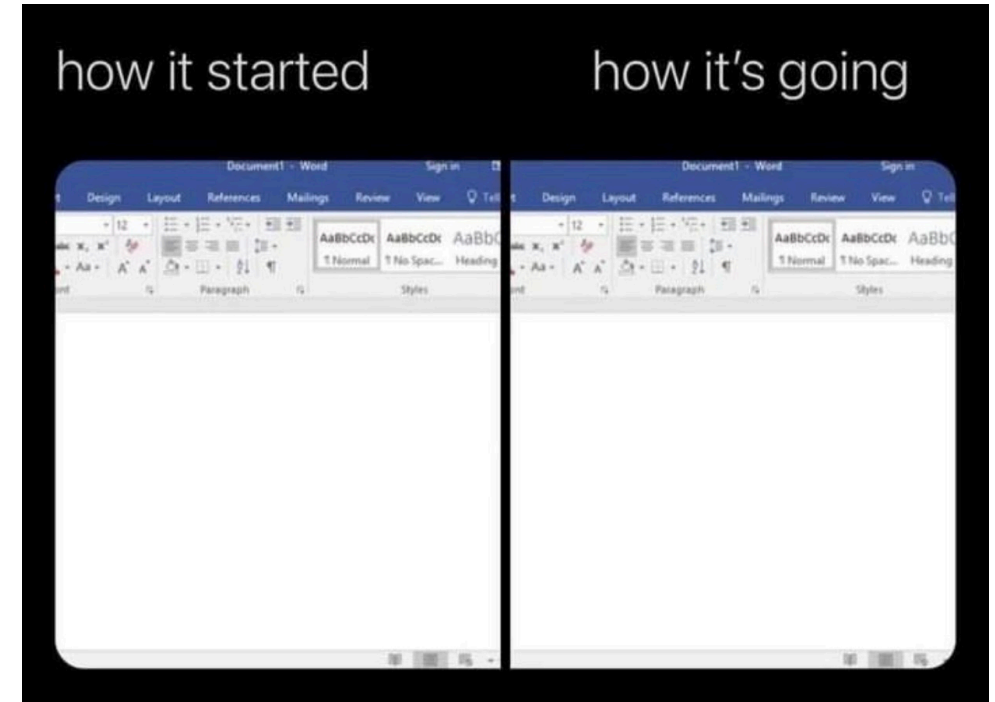
Maria Rogotskaya

What I will mainly focus on:

- Basic and AI-powered instruments for easier paper search and analysis
- A bit of personal experience

What will not be extensively covered:

- What is a literature review and how to write it
- How to work with academic literature





Outline

Part 1. Basics

- Papers Search: Scopus and WoS, SJR
- Reference managers: Zotero and Mendeley

Part 2. AI-powered tools

- Network graphs: Litmaps/Connected papers
- Literature search: inciteful.xyz, SciSpace, unriddle, ChatGPT
- Other: Semantic Scholar, Research Rabbit, ChatPDF

Literature Search: standard approach

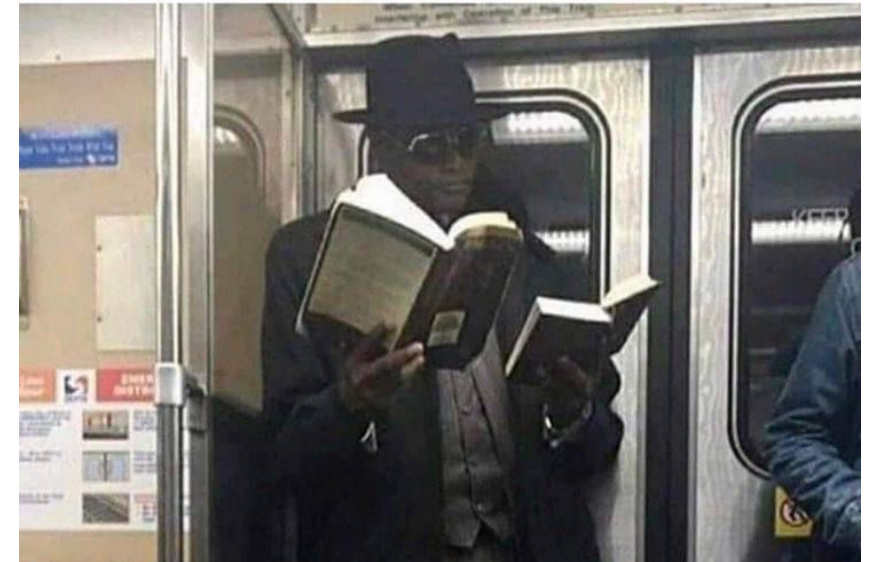
1. Identify key words (to use with Boolean operators)
2. Look up papers in **Scopus** (works with UoL email!)/**WoS/Google Scholar**. Sort by field, number of citations, year, etc
To check journal: [**SJR**](#)
3. Read abstract, then introduction and conclusion, then (if necessary) see the model
4. Repeat all over...

Literature Search: standard approach

Finding more papers

- Look through reference lists
- Look for review/meta-analysis papers
- See the Related literature/Literature review section in your papers

When the paper you're reading keeps citing another paper

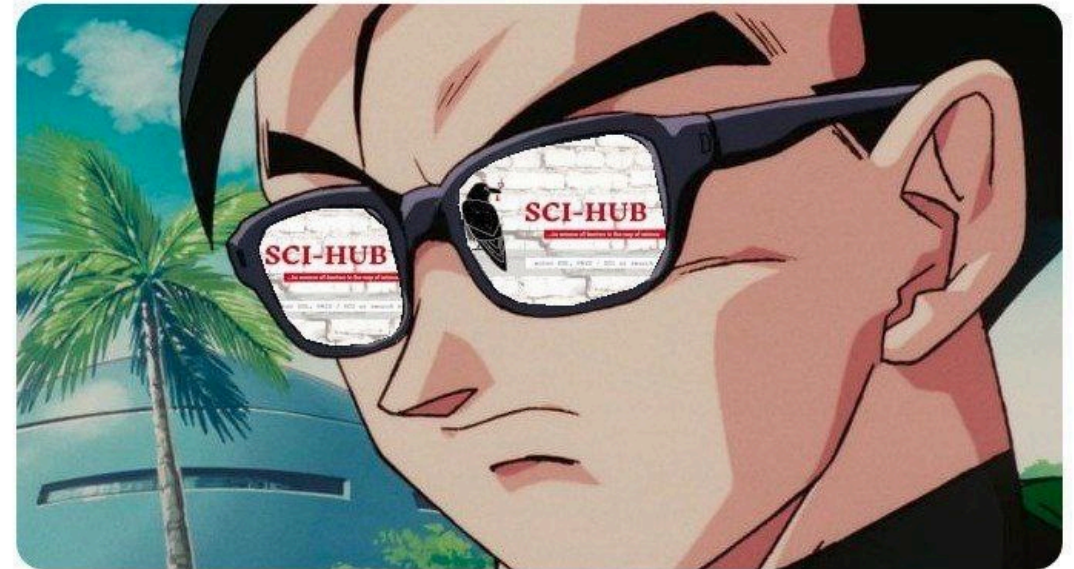


Where to get full texts?

1. HSE Library e-resources
(<https://library.hse.ru/e-resources>)
2. University of London Online Library
(<https://onlinelibrary.london.ac.uk>)
3. Sci-hub/Libgen – free access to papers

Buy this article for 42.64€

Me:



Managing your papers

- Main reference managers: Zotero and Mendeley
- Both are free, have some minor differences ([comparison](#))

Zotero

- Allows to store, organise, and share papers, create in-text citations and bibliography
- Basic plug-ins: [Zotero Connector](#) for your browser, [Office Connector](#), [Zotfile](#)
- [More Zotero plug-ins](#) (use VPN)
- + Many AI instruments have a plug-in for Zotero





AI-powered Literature Search

Graph-based:

1. Select a few relevant papers
2. Draw a graph to see connected papers
3. Update your graph until you have enough relevant literature

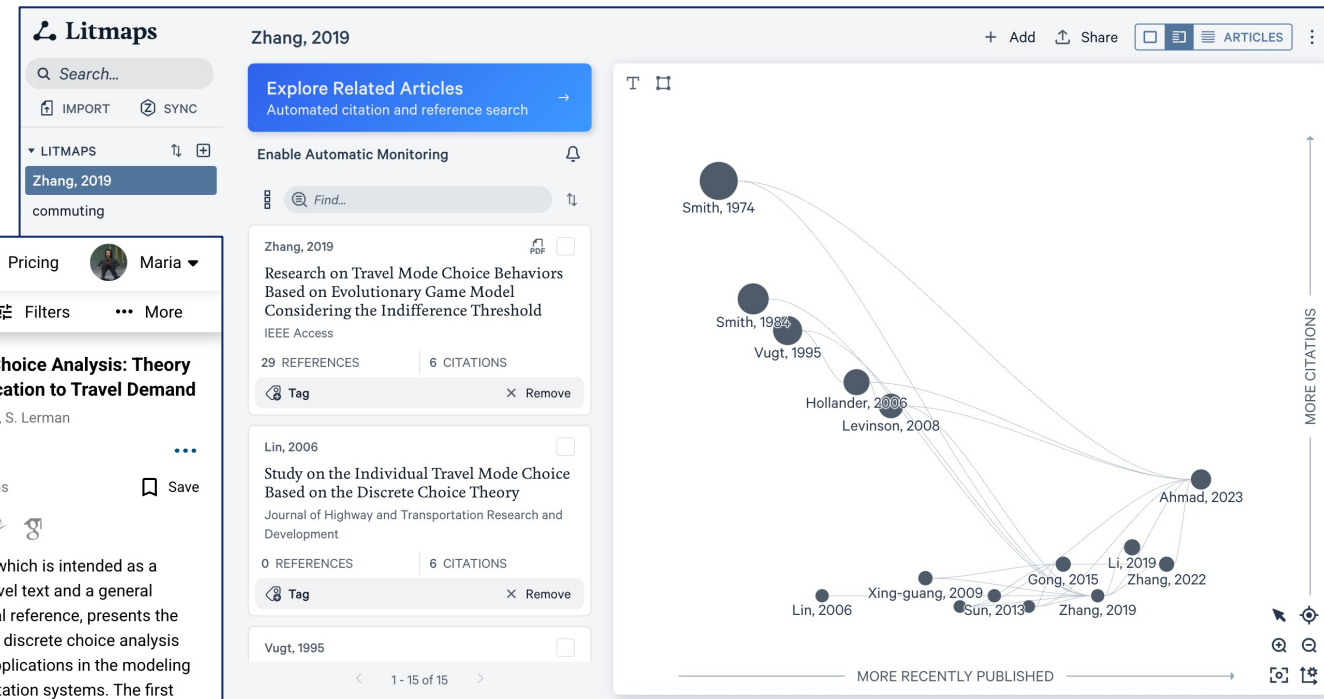
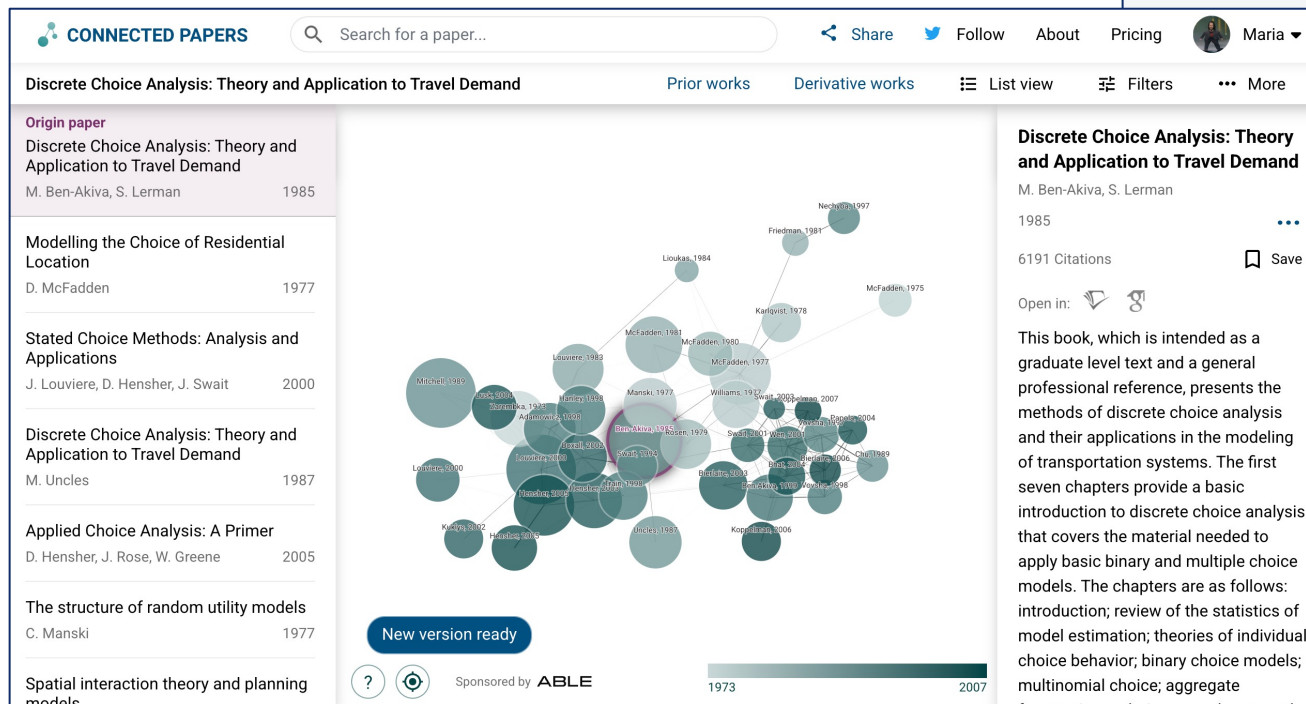
More standard:

- Chat with AI/ask questions to find relevant papers
- Use AI-tools combined with citation databases



Network graphs: Litmaps/Connected papers

Both can create a map of similar papers



Litmaps additionally allows to create a map of your papers

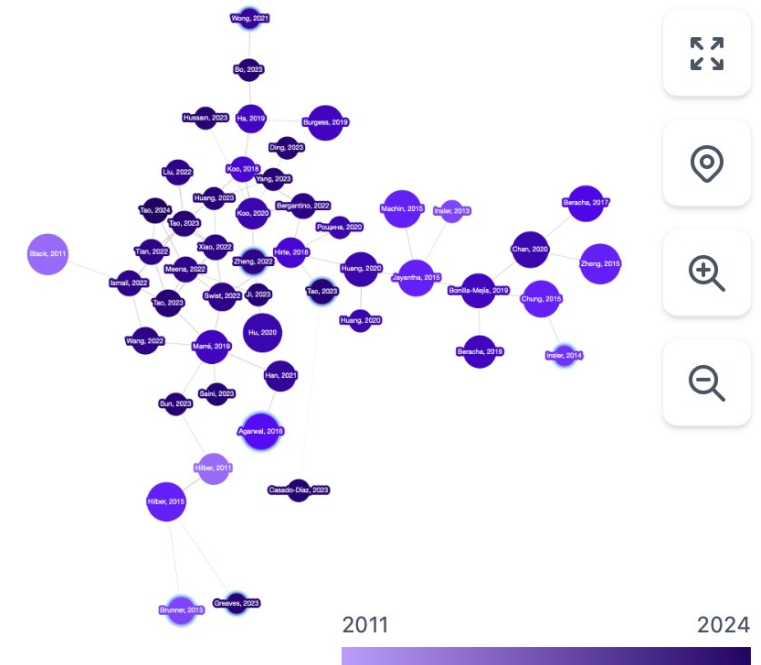
AI-powered Literature Search: inciteful.xyz

- Makes a graph with related academic papers
- Gives you similar, recent, most important, and review papers
- Has a Zotero plug-in

Similar Papers

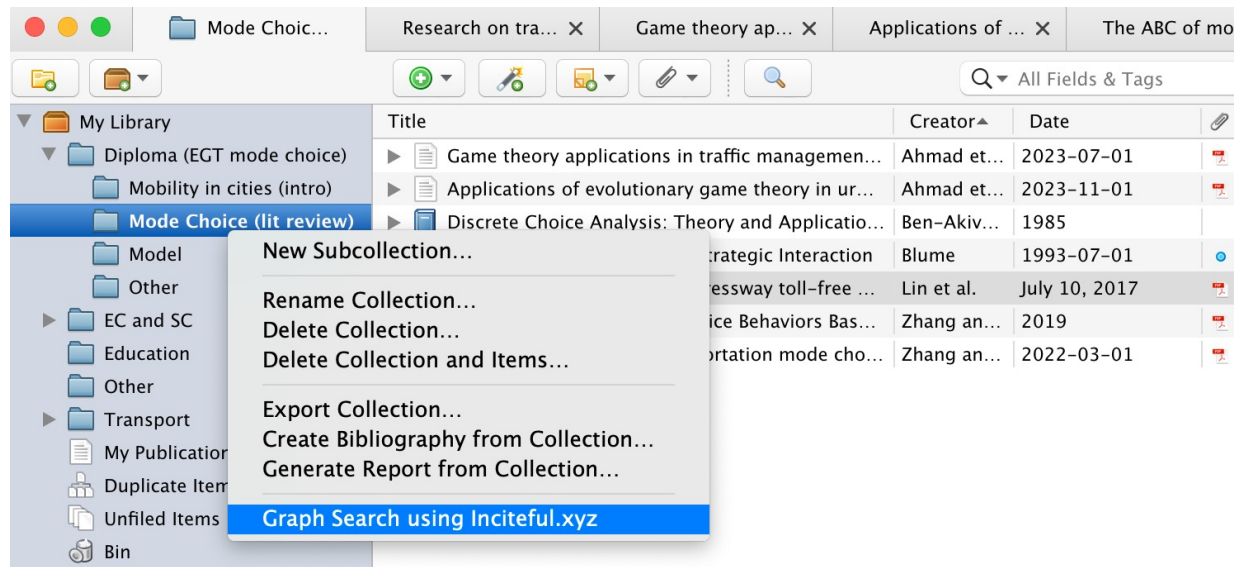
These are papers which tend to cite the papers you have selected above. They normally bias towards newer papers and can help you find the latest literature on the topic.

	published_year	similarity	num_cited_by
<div><div></div><div><u>Pricing the value of the chance to gain admission to an elite senior high school in Beijing: The effect of the LDHSE policy on resale housing prices</u></div></div>			
Jun Han, ... Huayi Yu <i>Cities</i>	2021	1.957921	4
<div><div></div><div><u>Dynamic capitalization effects of educational facilities during different market stages: An empirical study in Hangzhou, China</u></div></div>			
Yue Xiao, ... Zhou Gang-hua <i>Land Use Policy</i>	2022	1.789466	0
<div><div></div><div><u>The Effect of School Quality on House Prices: Evidence from Shanghai, China</u></div></div>			
Ziming Liu, ... Shuyi Feng <i>Land</i>	2022	1.724616	0
<div><div></div><div><u>Factors influencing residential location choice: learnings from the Indian context</u></div></div>			
P. K. Saini, Debapratim Pandit <i>Open House International</i>	2023	1.657566	0



AI-powered Literature Search: inciteful.xyz

- Upload a paper to get similar papers
- Upload two papers to see how literature connects them
- Upload a bunch of papers from Zotero:





AI-powered Literature Search: SciSpace

- Ask the question / type the key words
- Get general insights from the literature (usually rater recent) + a table with papers

The screenshot displays the SciSpace web application interface. At the top, the SciSpace logo is on the left, and navigation links for 'Papers', 'Pricing', 'Chat with PDF', and 'My Library' are on the right. A search bar contains the query 'How does the urban form affect travel mode choice?'. Below the search bar, a sidebar on the left shows various icons for navigation. The main content area displays the search results for 'My Searches / How does the urban form affect travel mode choice?'. It includes a 'Save' button, a 'High Quality' toggle, and a language selector set to 'en'. The results are summarized under the heading 'Answer from top 5 papers'. The text explains that urban form significantly influences travel mode choice by shaping the built environment, affecting accessibility, density, and transportation options. It then elaborates on two key aspects: 'Proximity to City Centers' and 'Density and Mixed-Use Development'. The 'Proximity to City Centers' section lists two bullet points: 'Residents living closer to city centers tend to have shorter travel distances, leading to lower car ownership and a higher likelihood of using public transit or non-motorized modes (Berrill et al., 2024) (Guerra & Li, 2021).', and 'Urban areas with higher population density exhibit a marked reduction in car usage, promoting sustainable mobility (Berrill et al., 2024)'. The 'Density and Mixed-Use Development' section lists two bullet points: 'Dense, mixed-use environments encourage active transportation and public transit use, as they provide better access to amenities and services (Yang et al., 2023).', and 'Transit-oriented development (TOD) areas significantly increase the probability of choosing public transit and non-motorized modes, especially at trip origins (Nasri & Zhang, 2019)'. At the bottom of the results, there is a 'Read More' link and a 'Save to Notebook' button, along with a 'Find Topics' button.

SCISPSPACE

Papers ▾ How does the urban form affect travel mode choice? ×

Pricing + Chat with PDF My Library

My Searches / How does the urban form affect travel mode choice? Save

High Quality en ▾

Answer from top 5 papers ▾

The urban form significantly influences travel mode choice by shaping the built environment, which affects accessibility, density, and the availability of transportation options. Research indicates that urban characteristics such as proximity to city centers, density, and mixed-use developments play crucial roles in determining whether individuals opt for private vehicles or alternative modes of transport. The following sections elaborate on these key aspects.

Proximity to City Centers

- Residents living closer to city centers tend to have shorter travel distances, leading to lower car ownership and a higher likelihood of using public transit or non-motorized modes (Berrill et al., 2024) (Guerra & Li, 2021).
- Urban areas with higher population density exhibit a marked reduction in car usage, promoting sustainable mobility (Berrill et al., 2024).

Density and Mixed-Use Development

- Dense, mixed-use environments encourage active transportation and public transit use, as they provide better access to amenities and services (Yang et al., 2023).
- Transit-oriented development (TOD) areas significantly increase the probability of choosing public transit and non-motorized modes, especially at trip origins (Nasri & Zhang, 2019).

Read More ▾

Save to Notebook APA, Bullets ▾ Find Topics



AI-powered Literature Search: SciSpace

- Extracts results, methods, conclusion, etc from the paper

The screenshot displays the SciSpace web application interface. At the top, there's a search bar with the query "How does the urban form affect travel mode choice?". Below the search bar, a table lists search results. The table has three main columns: "Papers (10)", "Findings", and "Methods Used".

Papers (10)	Findings	Methods Used
<p>Journal Article • DOI 10.1016/j.trb.2024.100000</p> <p>1. Comparing urban form influences on travel distance, car ownership, and mode choice</p> <p>Peter Berrill, Florian Nachtigall, Aneeq Javaid +3 more 01 Mar 2024 • Transportation Research Part D-transport and Environment</p> <p>Request PDF Podcast Chat</p> <p>66</p>	<ul style="list-style-type: none">Urban form significantly influences travel distances and car ownership.Proximity to city center predicts trip distances and car mode choice.	<ul style="list-style-type: none">Gradient boosting decision tree models used for analysis.Regression models employed to investigate urban form influences.
<p>Journal Article • DOI 10.1016/j.envurb.2023.101000</p> <p>2. Assessing impacts of the built environment on mobility: A joint choice model of travel mode and duration</p> <p>Yang Yang, Samitha Samaranyake, Timur Dogan 02 Feb 2023 • Environment And Planning B: Urban Analytics And City Science</p> <p>Request PDF Podcast Chat</p> <p>66</p>	<ul style="list-style-type: none">Dense, mixed-use environments promote active transportation and public transit.Ultra-dense, centralized developments can increase travel time and vehicle use.	<ul style="list-style-type: none">Joint choice model for travel mode and durationFormulated as Random Forest classifier with predictor features.
<p>Open access • Journal Article • DOI 10.1016/j.jtr.2021.100000</p> <p>3. The relationship between urban form and mode choice in US and Mexican cities: A comparative analysis of workers' commutes</p> <p>Erick Guerra, Meiqing Li 24 Apr 2021 • Journal of Transport and Land Use</p> <p>Request PDF Podcast Chat</p> <p>66</p>	<ul style="list-style-type: none">Urban form affects commuting mode choice in US and Mexico.Higher density areas reduce private vehicle commuting likelihood.	<ul style="list-style-type: none">Fitting multinomial logit models to commuter data.Simulations of urban form and commute mode relationships.

On the right side of the interface, there's a sidebar with a "Create or add columns" section. It lists various categories that can be added to the table, such as "Insights", "TLDR", "Conclusions", "Summarized Abstract", "Results", "Summarized Introduction", "Literature Survey", "Limitations", "Contributions", "Practical Implications", "Objectives", "Research Gap", "Future Research", "Dependent Variables", "Independent Variables", "Dataset", and "Population Sample".

AI-powered Literature Search + Analysis: ChatGPT

- Has embedded AI tools for papers search
- Can give seminal papers, stages of the development of your field
- Generate key words (for more standard search with citation databases)
- Can read papers and extract info from them

Research & Analysis

Find, evaluate, interpret, and visualize information

1



Scholar GPT

Enhance research with 200M+ resources and built-in critical reading skills. Access Google Scholar, PubMed, bioRxiv, arXiv...

By awesomegpts.ai

2



Consensus

Ask the research, chat directly with the world's scientific literature. Search references, get simple explanations,...

By consensus.app

3



SciSpace

Do hours worth of research in minutes. Instantly access 287M+ papers, analyze papers at lightning speed, and...

By scispace.com

4



Scholar AI

AI Research Assistant — search and review 200M+ scientific papers, patents, and books. Research literature, discov...

By scholarai.io

5



Video Summarizer

Youtube video summarizer. Video summaries, chat with YouTube video.

By tempify.de

6



Wolfram

Access computation, math, curated knowledge & real-time data from Wolfram|Alpha and Wolfram Language;...

By wolfram.com

ALWAYS double check the papers GPT gives you (some of do not exist)

Other AI Instruments

Semantic Scholar – another instrument for **literature search**

- An alternative to google scholar/scopus/wos
- Vast search customisation

Research Rabbit – another instrument for **network graphs**

- Visualizes the connection between your and other papers
- Can connect to your Zotero library

Unriddle, ChatPDF – upload pdfs and ask questions about content

- Has limits on the number of papers per month/day
- Can tell you that something is not in the paper when in fact it is

Grammarly / Language Tool – check your spelling, grammar, style, etc

Concluding remarks

AI instruments can come in handy but use them wisely!

- Do not use AI to generate text for your thesis
- AI instruments are good for initial screening, but you should still read the papers yourself
- Double-check after AI – it is still far from perfect

My advisor asking me why my literature review starts with “As an AI language model”

