## Literature review

"I love writing lit reviews!"

said no one, ever.





A literature review is a structured analysis of a body of literature.

The papers should be grouped by topic, and discussed so that the reader understands their contribution, their limitations, and open questions.

## General guidelines

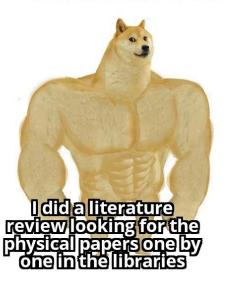
#### General guidelines

- Begin a rough literature review as soon as you start reading.
- You should also capture the bibliographic data as you go.
- Keep a copy of every paper you read.
- As you add papers group them by topic and contribution.
- Take notes on each paper and how they relate to each other.
- Briefly summarize each paper's contribution and the evidence.
- Note any shortcomings or features that are of interest.
- You may find a survey paper, or a recent paper with a thorough literature review of its own, that means that many of the older papers do not need to be discussed.

# Finding research papers



## PhD students before the 90s



## PhD students now



@ZelestianPhDmemes

#### Where to search

- Check the university's library
- Google Scholar
- Arxiv
- Scihub
- Anna's archive

#### Tools that help

- <u>Scispace</u>: SciSpace is the easiest way to find, and understand any research paper. Get simple explanations and instant answers from AI and discover a network of connected and relevant articles.
- <u>Litmaps</u>: Tool that helps with literature reviews. Generates a map of the most relevant articles related to an initial article, allowing users to easily find articles.
- Research rabbit: Free online "citation-based literature mapping tool". It connects
  your research interests with related articles and authors.
- <u>Inciteful</u>: Inciteful's goal is to provide the world with free tools to help accelerate academic research. This means catching up on a new topic, finding the latest literature, or discovering how two ideas are connected.
- <u>Zotero</u>: Zotero is a free, easy-to-use tool that will help you collect, organize, cite, and share research.

#### Differences in the Al Literature Mapping tools



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Tools	Cost	Literature searching	Interactive citation network map	Explore Together	Author Network	Filters	Integration with referencing software
Research Rabbit	Free	By similarity and citation count	Yes, by early work, later work, and similar work	Collaborate with other researchers. Leave comments on the collection	Can explore the author/ co-author network	Keywords	Sync with Zotero and import/ export RIS and BibTeX files
Inciteful	Free	By similarity and citation count	Yes, by early work, later work, and similar work	No	Can explore author/ similar author/ journal names	Keywords/ Distance/ Year	Import/ export files from BibTex/ Zotero
Litmaps	Freemium	By similarity, citation count / Al semantic search	Yes, by early work, later work, similar work, momentum (citation count, adjusted for time)	Can share your collection, export your map	Co-author search	Keywords/ Year	Sync with Zotero and import/ export RIS and BibTeX Files
Connected Papers	Freemium	By similarity and citation count	Yes, by early work, later work, and similar work	Can share your graph. Can not collaborate with other researchers	Can't search by author name/ co- author	Time/ Keywords/ PDF or open access papers	Export files in BibTex

Organization of the referenced work

#### Organization of the references

- Introduction: Gives a quick idea of the topic of the literature review, such as the central theme or organizational pattern.
- Body: Contains your discussion of sources and is organized either chronologically, thematically, or methodologically.
- **Conclusions**: Discuss what you have drawn from reviewing literature so far. Where might the discussion proceed?

## Critical Reading









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#### Critical questions

- Is there any contribution? Is it significant?
- Is the contribution of interest?
- Are the results correct?
- Is appropriate literature analyzed?
- Does the methodology really answer the initial question?
- Are the proposals and results critically analyzed?
- Are appropriate conclusions drawn from the results or are there other possible interpretations?
- Are all the technical details correct?
- Could the results be verified?
- Are there any serious ambiguities or inconsistencies?
- What is missing? What would complete the presented work? Are any of the materials unnecessary?
- Can you understand the article? Is it clearly written?

## Writing tools



#### Writing tools

- <u>Latex</u>: LaTeX is a high-quality typesetting system; it includes features
  designed for the production of technical and scientific documentation.

  LaTeX is the de facto standard for the communication and publication
  of scientific documents. LaTeX is available as free software.
- Overleaf: Overleaf is a cloud-based collaborative LaTeX editor used for writing, editing, and publishing scientific documents. Partners with a wide range of scientific publishers to provide official journal LaTeX templates and dropshipping links.