

**Les petits-déjeuners sur l'IA au
service des enseignants-chercheurs**

Faire sa revue de littérature avec l'IA

*Pr Florence Laval et Théophile Ossard
29 octobre 2024*

Proposition d'une démarche : les étapes d'une revue de la littérature optimisée



Un partage d'expérience et une démonstration spécialement conçue pour ce webinaire

Notre problématique : Comment faire sa revue de la littérature avec l'IA ?

How to conduct a literature review using artificial intelligence ?

Notre objectif : faire une revue systématique de la littérature (SLR) pour synthétiser les connaissances

Proposition d'une démarche : les étapes d'une revue de la littérature optimisée

1. **Découverte du sujet** : identification des articles centraux et définition des mots-clés (**Scopus AI**)
2. **Recherche de références** sur des bases de données (Scopus et WOS)
3. **Filtrage** : traitement des données et sélection (screening) des articles (**Rayyan**)
4. **Seconde recherche** : visualisation du réseau de citations afin d'enrichir la base d'articles (Research Rabbit)
5. **Extraction** : Téléchargement des articles en PDF
6. **Synthèse** : Analyse des sources pour répondre à la problématique (**Notebook LM**)

Etape 1 Découverte du sujet (Scopus AI)

How to conduct a literature review using artificial intelligence?

Hide Copilot steps ^

- ☑ Creating plan to answer your query
- ☑ Performing natural language search:
 - Literature review using artificial intelligence
- ☑ Performing keyword search:
 - ("artificial intelligence" OR "ai" OR ((machine OR deep) AND learning) OR "cognitive computing")
- ☑ Generating summary

Summary

To conduct a literature review using artificial intelligence (AI), several steps and considerations can enhance the process:

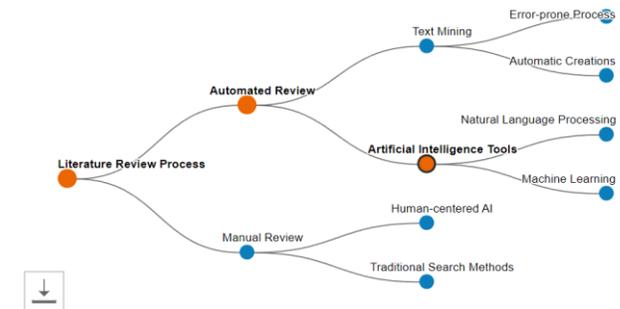
Steps to Conduct an AI-Enhanced Literature Review

1. Utilize AI Tools for Initial Search and Screening:
 - AI tools like ChatGPT can assist in the initial search and screening of relevant literature by quickly analyzing large volumes of text and identifying key themes and

References

- 1 Using LLM (Large Language Model) to Improve Efficiency in Literature Review for Undergraduate Research
Antu S.A., Chen H., Richards C.K.
CEUR Workshop Proceedings 71 2023
- 2 Artificial intelligence and the conduct of literature reviews

Concept map



Etape 2 Recherche de références sur des bases de données (Scopus et WOS)

(TITLE ("Literature review*" OR "Systematic literature review*" OR "Systematic searching") AND TITLE ("powered" OR "conduct" OR "efficiency" OR "and" OR "for" OR "approach") AND TITLE ("AI" OR "Chat GPT" OR "Artificial intelligence" OR "AI assisted" OR "Generative AI" OR "LLM")) AND PUBYEAR > 2021 AND PUBYEAR < 2025

371 documents found

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 - Platforms
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232 results from Web of Science Core Collection for:

"literature review*" OR "systematic literature review*" OR "systematic searching" (Title) and "powered" OR "conduct" OR "efficiency" O...

Copy query link

Title "literature review*" OR "systematic literature review*" OR "systematic searching"

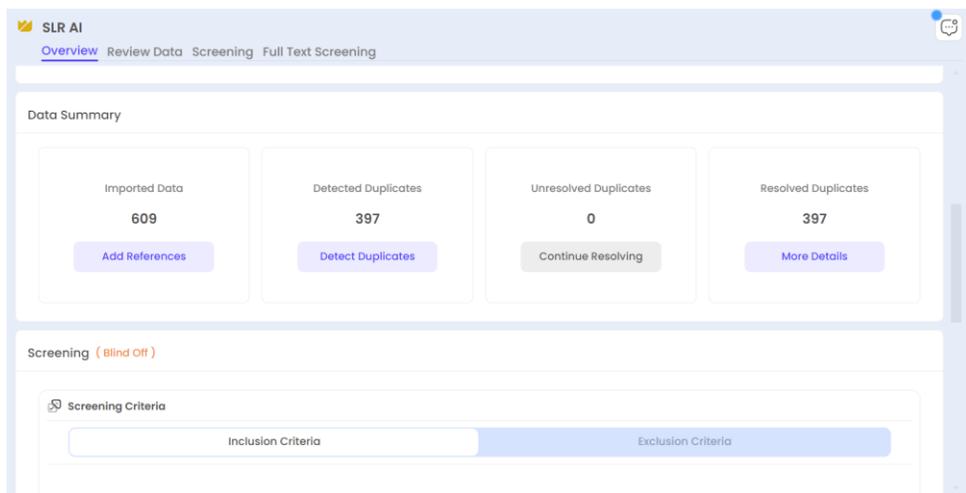
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And Title "AI" OR "Chat GPT" OR "Artificial intelligence" OR "AI assisted" OR "generative AI" OR "LLM"

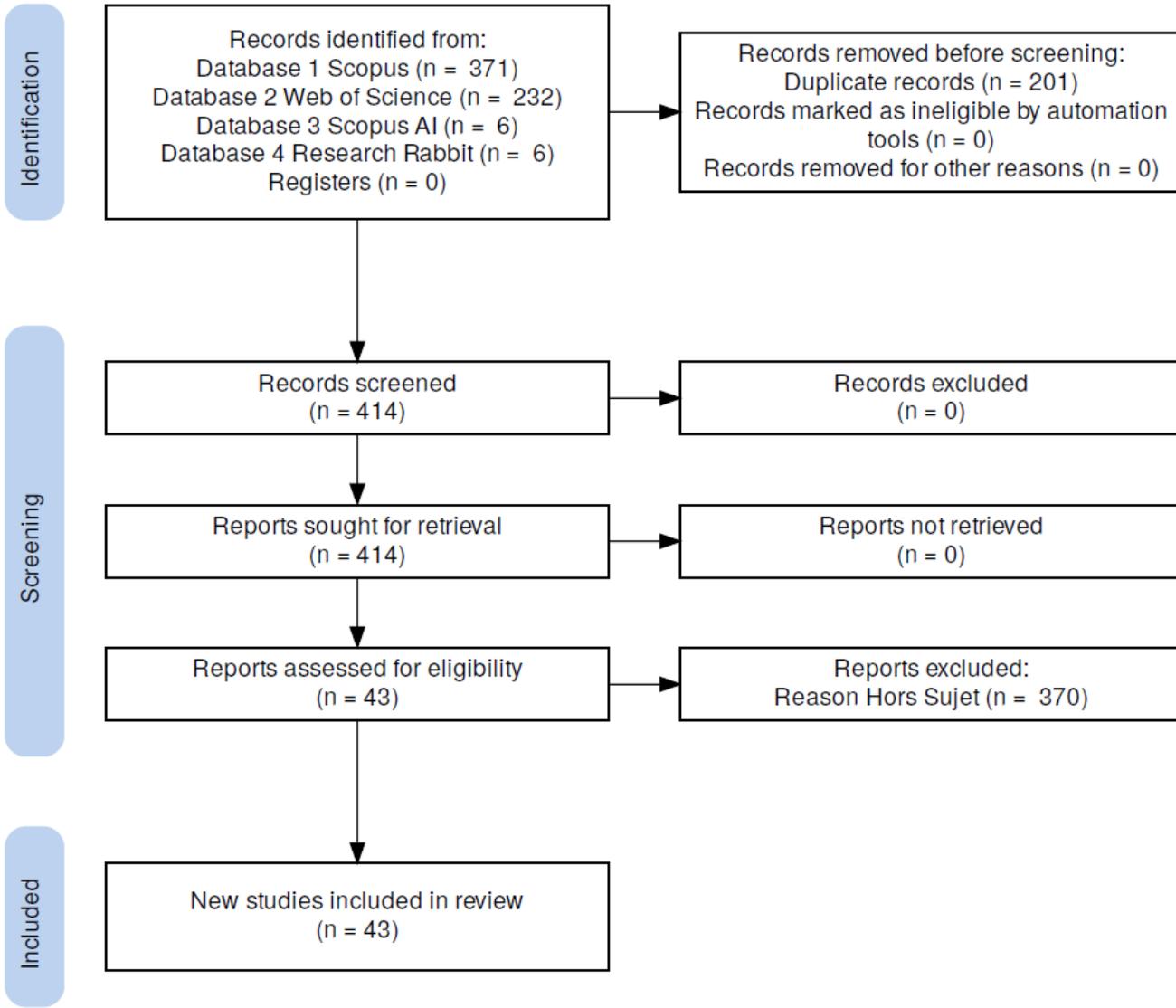
And Author

+ Add row + Add date range Advanced search

Etape 3 Filtrage (Rayyan)



Identification of new studies via databases and registers



Etape 4 Analyse du réseau de citations

The screenshot displays a citation network analysis interface. On the left, there is a sidebar with collection management options: 'New Collection', 'New Category', and 'Import Zotero Collection'. Below this, a list of collections is shown, including 'Uncategorized', 'DER SLR IA' (43 items), 'AI SLR 13/10/2024' (59 items), 'SLR WITH AI' (32 items), and 'SLR AI' (37 items). The main area shows a list of papers with details for two selected items:

- DER SLR IA**: Paper by Schryen and Yang (2024), titled 'Adopting Generative AI for Literature Reviews: An Epistemological Perspective'. It is associated with tags 'AI SLR 13/10/2024', 'SLR WITH AI', and 'SLR AI'.
- Using LLM (Large Language Model) to Improve Efficiency in Literature Review for Undergraduate Research**: Paper by Antu and Richards (2023), associated with tags 'AI SLR 13/10/2024', 'SLR WITH AI', and 'SLR AI'.

The network graph in the center shows connections between authors and papers. The central node is 'Wagner 2021', which is connected to 'Verma 2023', 'Pan 2023', 'Stone 2023', 'Walsh 2023', 'Spillias 2023', 'Torre-López 2023', 'Álvarez-Martínez 2023', and 'Patil 2023'. Other nodes include 'Roco-Videla 2023', 'Carbajal-Degante 2023', 'Caviédes-Olmos 2022', 'Mangoat 2023', 'Whitfield 2023', 'Kamra 2022', 'Foulouier 2021', 'Burger 2023', 'Angheliescu 2023', 'Atkinson 2023', and 'undefined 2023'. The interface includes filters for 'Abstracts' and 'Comments', a 'Filter' dropdown set to 'Custom', and a 'Connections between your collection and 0 papers' section. The graph type is set to 'Network', and labels are set to 'First Author' and 'Last Author'. A 'Filter these items' input field is present. On the right, there are sections for 'EXPLORE PAPERS' (Similar Work: 1118, Earlier Work: 15, Later Work: 2), 'EXPLORE PEOPLE' (These Authors: 166, Suggested Authors: 217), and 'EXPLORE OTHER CONTENT' (Linked Content). At the bottom right, there are options for 'PUBLIC COLLECTION', 'SHAREABLE LINK' (Copy), 'COLLABORATORS' (Edit), and 'EMAIL UPDATES'. A 'Zoom Out', 'Fit All', and 'Zoom In' section is at the bottom center.

Etape 5 Extraction

- 🌐 Open URL or DOI F3
- Search ShortScience
- Change entry type ▶
- Get bibliographic data from DOI/ISBN/...

The screenshot shows a software interface with a menu bar (File, Edit, Library, Quality, **Lookup**, Tools, View, Help) and a toolbar with icons for adding, opening, and saving. A search bar is present. A dropdown menu is open under 'Lookup', showing options: 'Search document identifier online', 'Search full text documents online' (Alt+F7), and 'Search for unlinked local files' (Shift+F7). Below the menu, a table of entries is visible with columns for entry type, author, and title.

	Entryt...	Author/Editor	Title
	Article	Kao	Societal, Economic, F
	Article	Liu et al.	P24 Improving Efficie

Etape 6 Synthèse (Notebook LM)

The screenshot displays the NotebookLM interface. On the left is a sidebar with the title "NotebookLM" and a hamburger menu icon. Below the title, there is a "Sources" section with a shield icon and a plus sign. Underneath, it says "Sélectionner toutes les sources" with a checkmark icon. Two source entries are listed, each with a PDF icon and a checkmark: "ADVANCING SYSTEMATI..." and "AI-based literature revie...".

The main workspace is titled "Untitled notebook" and features a settings gear icon in the top right. It contains several navigation buttons: "Questions fréquentes", "Guide d'étude", "Sommaire", "Timeline", and "Document de briefing". Below these buttons, the word "Résumé" is visible.

On the right side of the workspace, there is a video player interface. It shows the title "Untitled notebook", a play button, a progress bar, and the time "00:00 / 25:56". Below the video player, the text "Questions suggérées" is displayed.

Conclusion

Faire sa revue de la littérature avec l'IA

Opportunités

Risques

Efficacité

Reproductibilité

L'IA enrichit le processus, mais l'expertise humaine reste indispensable pour assurer la rigueur scientifique + travail collaboratif

Pour aller plus loin !



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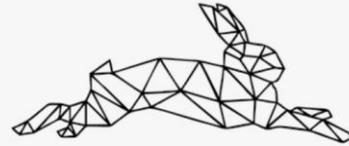
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Scopus[®] AI

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



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

NotebookLM

<https://notebooklm.google.com/>

Cram, W. A., Templier, M., & Paré, G. (2020). (Re) considering the concept of literature review reproducibility. *Journal of the Association for Information Systems*, 21(5)
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Ngwenyama, O., & Rowe, F. (2024). Should We Collaborate with AI to Conduct Literature Reviews? Changing Epistemic Values in a Flattening World. *Journal of the Association for Information Systems*, 25(1), 122-136.
<https://doi.org/10.17705/1jais.00869>

Wagner, G., Lukyanenko, R., & Paré, G. (2022). Artificial intelligence and the conduct of literature reviews. *Journal of Information Technology*, 37(2), 209-226. <https://doi.org/10.1177/02683962211048201>

Merci

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