Unlocking Insights with Generative AI: How to Enhance Research Efficiency in the Library

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How can GenAI improve research workflows?
There are many challenges in research today

Early career researchers and academics

- Complex research landscape
- Limited search tools
- Disciplinary silos

- Information overload
- Inefficient search
- Limited collaboration

Suboptimal productivity and collaboration / missed opportunities

= Lower academic and societal impact

Scopus AI was developed in response to a need identified by 60% of Scopus users: learning about new topics more effectively
Libraries and GenAI: assessment, curation, teaching
Scopus AI

A brief overview of how it works to solve this problem
What is included in a Scopus AI response?

**Summary**
A fully referenced Summary including guidance on the tool’s confidence in the response

**Expanded summary**
An extended referenced summary that explores each query from multiple perspectives

**Concept map**
A downloadable visual that uses keywords to provide a bird’s-eye view of the topic space

**Foundational papers**
A list of the influential articles that inspired the articles cited in the summaries

**Topic experts**
A list of the top researchers in the field drawn from Scopus’ 19.6m Author Profiles

**Go deeper questions**
A series of prompts designed to help you continue exploring and learning
POLL QUESTION
TIME!
Accelerating research processes with Scopus AI

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Based on a synthesis structure that can be expanded by iteration until the user decides to conclude the interactions

- Optimal answer
- Saturation
Objectives

1. Explore Scopus AI Beta and its main functions

2. Test Scopus AI Beta based on a specific case study in the field of social sciences
Useful overview of a research problem

Identify keywords and relationships

Identify foundational works and influential authors

Locate and export references

Operational synthesis for literature reviews and theoretical frameworks

Based on quality and previously validated research

Summaries since 2013

Concept map for initial response only

No option to save searches and access search history

Non-hierarchical arguments

Simplification

Transparency and traceability
<table>
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<th>Research needs</th>
<th>Become familiar with keywords</th>
<th>Locate relevant literature</th>
<th>Explore associated topics</th>
<th>Identify research gaps</th>
<th>Review the state of the art</th>
<th>Uncover trends, patterns and dominant approaches</th>
<th>Stay updated</th>
<th>Gain in-depth field insight</th>
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Traditional search
Search with Scopus AI
Hybrid search
Global synthesis of a given area or an intersection of concepts or variables, facilitating multidisciplinary explorations.
Accelerator of academic processes that allows to conduct modern researches

- Generation of **focused synthesis**
- Use of **natural language**
- **Reduced time** invested in both search and evaluation of results
Report


Research Article

Wanna see the poll question results?
Thank you
Scopus AI takes extensive steps to minimize hallucinations

The large language models (LLMs) used in GenAI tools bring many benefits, but they also come with shortcomings. These include the potential to generate ‘hallucinations’ — inaccurate or false responses, undermining trust in the information they deliver.

Scopus AI takes a multi-stranded approach to reducing hallucinations.

1. Responses are grounded in Scopus content
2. Sources are updated daily
3. Strict ‘guardrails’ guide the LLM
4. Sophisticated RAG fusion technology
5. Rigorous evaluation frameworks
6. Cross-departmental human oversight
7. Community feedback
Scopus AI is **transparent** and always shows its workings.

We’ve made Scopus AI responses easy to evaluate, verify and confirm.

Every claim or assumption cites the Scopus documents used to generate it. And because Scopus AI is built on Scopus, the references can be downloaded in bulk to your preferred reference manager, or to SciVal for further analysis.

**Scopus AI provides guidance on its confidence in the relevancy of its response** and can explain the technology it uses.
Scopus AI takes action to **prevent unfair bias**

**Scopus AI is committed to preventing the creation or reinforcement of all forms of unfair bias.**

We use only trusted Scopus data.

We focus on relevancy of content, not impact.

We conduct rigorous evaluations.

We provide the LLM with strict guidance.

We learn from user testing.

We draw on a potent mix of guidelines, evaluation, technology and human oversight to help us achieve this.

For example, we actively test Scopus AI for biased responses using a variety of internationally-recognized frameworks.
We have designed Scopus AI to avoid unnecessary data retention.

For example, Scopus AI uses OpenAI’s large language model (LLM) ChatGPT hosted on Microsoft Azure to synthesize results found by our vector search. We have an agreement in place that information will not be stored or used to train OpenAI’s public model.

We also comply with privacy regulations like GDPR.
Scopus AI draws on a unique & powerful blend of technology

Scopus AI’s strength lies in the way these technological elements interact with the underlying dataset.

For example, the sophisticated vector search and custom-built small language model source the most relevant Scopus content, while the prompt engineering ensures the quality of the large language model’s response.

In addition, Scopus AI is home to our patent-pending retrieval augmented generation (RAG) fusion technology.
Scopus AI was developed with the academic community.

Decisions around Scopus AI enhancements are rooted in compelling user feedback. We have worked with thousands of researchers, academic leaders and librarians worldwide to understand their needs and rigorously test new ideas since the earliest design stages of Scopus AI. That collaboration remains just as valuable today, as we continue to evolve Scopus AI.

Just some of the features shaped by user feedback:
- Position of Scopus AI in Scopus
- Emphasis on references
- Concept map
- Foundational papers
- Expanded summary
- Confidence layer
- SciVal export option
Thank you!

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