Al for Research - State-of-the-Art



 <u>Home AI Short Version (https://uia.instructure.com/courses/14569/pages/home-short-version)</u> - State-of-the-Art -<u>Next (https://uia.instructure.com/courses/14569/pages/ai-for-research-talking-to-pdfs)</u>

State-of-the-Art

A state-of-the-art chapter establishes **credibility**, showing you're well-versed in current domain knowledge. This ensures a **sound foundation** for your research, highlighting gaps and potential innovations. It provides readers with a **contextual understanding**, setting the stage for your work's relevance. Moreover, it guards against **redundancy**, ensuring you don't unintentionally replicate existing studies. Lastly, it can open doors for **networking and collaboration**. In essence, this chapter is not mere tradition but a compass, positioning your work within the larger academic landscape.

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1. Tapping into University Resources

Begin by exploring your university library and reliable online tools; they house a wealth of peerreviewed journals and articles that can form the backbone of your state-of-the-art chapter. Don't shy away from consulting professors and colleagues. Often, they can pinpoint seminal papers that can give your research a running start. Additionally, librarians can guide you to lesser-known resources or databases, ensuring a comprehensive grasp of your subject matter. In short, maximize the collective wisdom and tools around you.

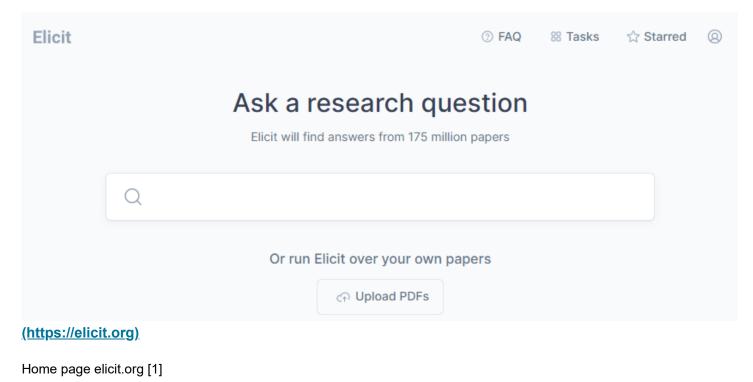
2. Engaging AI Tools

Elicit.org \Rightarrow (https://elicit.org) fosters collaborative research, emphasizing peer feedback and scholarly community. Meanwhile, <u>Semantic Scholar</u> \Rightarrow (https://www.semanticscholar.org) leverages AI, sifting through vast literature to highlight the most relevant and impactful papers. Together, they can optimize your research.

| Feature | Elicit | Semantic Scholar |
|---------------|--|--|
| Purpose | Literature review | General-purpose research |
| Search method | Semantic similarity | Keyword search, citation search, topic modeling |
| Features | Summaries of abstracts, key information extraction | Paper filtering, citation analysis, topic modeling |
| Cost | Free | Free for personal use, paid plans for institutions |
| | | |

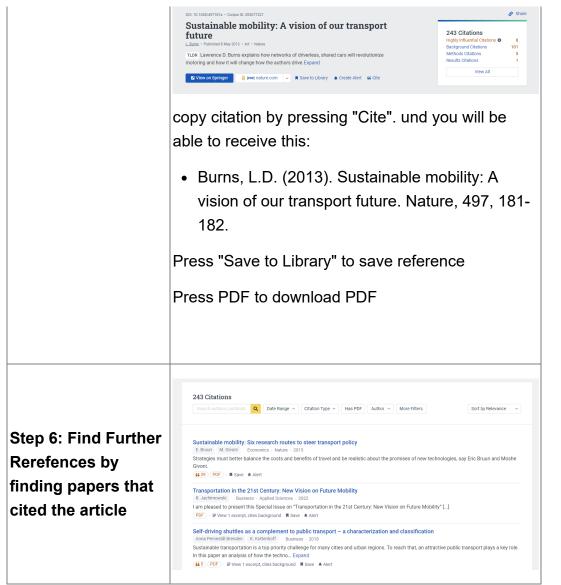
3. Elicit.org

Elicit.org (https://elicit.org) is a newer tool that uses large language models to generate answers to your questions in plain English. This can be helpful if you are not familiar with the technical jargon of your field or if you are looking for a more comprehensive overview of a topic. Elicit.org also has a feature that allows you to brainstorm questions, which can be helpful if you are not sure what to ask.



4. Example: Finding relevant articles with Elicit.org & Semantic Scholar

| 0/23, 5:03 PM | Al for Research - State-of-the-Art: Practical Al Tools – half | | |
|--|--|--|--|
| Step1: Paste your free text or abstract into eleciti.org | here: we pasted the previous text from Getting Started" step 5: Transforming the Commuting Experience: The Promise of Driverless Cars | | |
| Step 2: Sort by "Citations" | Filter V Sort by 11 Paper title Abstract summary ng PDF Year Citations | | |
| Step 3: Select a paper of interest. | Paper title ☆ Autonomous Vehicle Implementation Predictions: Implications for Transport Planning Q T. Litman 2015 848 Citations ☆ Sustainable mobility: A vision of our transport future Q Lawrence D. Burns □ Nature 2013 212 Citations | | |
| Step 4: Click ""semantic scholar" to get more details | Sustainable mobility: A vision of our transport future Relative consumations Nature cons 2013 212 Citations (Semantic Scholar φ) (DOI φ) | | |
| step 5: Find PDF, Copy Citation | You are now in semanticscholar.org | | |



Tutorials for Elicit.org

 Using elicit.org for AI help
 Write a Research Proposal

 with literature review
 ⇒
 in 2 Days with Elicit

 (https://youtu.be/V1PL0QN9gNU)
 (https://youtu.be/YO9UiBWx6jw)

 [5]
 [6]





5. Semantic Scholar

Semantic Scholar is a more established tool that has a larger database of papers. It also has features for tracking your research and visualizing the relationships between different papers. This can be helpful if you are conducting a complex research project or if you are looking for specific information from a paper. Semantic Scholar is also more technical and can be difficult to use for beginners.

- Start with Semantic Scholar: Begin your exploration on <u>Semantic Scholar</u>
 ⇒
 <u>(https://www.semanticscholar.org/)</u> to help you find the most relevant academic papers. You can search by keywords, authors, or specific paper titles.
- 2. **Filter and Sort**: Use Semantic Scholar's filtering options to narrow down results by year, author, or journal. This can help you focus on the most recent or influential papers in your domain.
- 3. **Citation Analysis**: One of Semantic Scholar's strengths is its citation analysis. Look at which papers are frequently cited to gauge their influence and importance in the field.
- 4. **Related Work**: Utilize the "Related Work" section on Semantic Scholar. It provides a list of papers that are closely related to your topic of interest.
- 5. **Author Profiles**: If you find a researcher who's made significant contributions to your area of interest, click on their profile. Semantic Scholar will show you all of their publications, allowing you to trace the evolution of their work and related developments in the field.
- 6. **Alerts and Recommendations**: Set up alerts on Semantic Scholar for specific keywords or topics. This way, you'll be notified of new papers and breakthroughs as they're published.
- 7. **Integrate Chatbot Insights**: If you're using a domain-specific chatbot, integrate the insights and references you receive from it with your findings on Semantic Scholar. Cross-reference any sources or papers the chatbot suggests.



Tutorials for Semantic Scholar

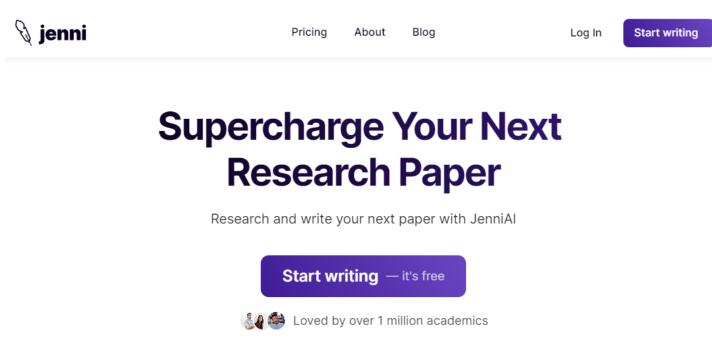
| <u>Semantic Scholar, A Free Al-Powered</u> | <u>Semantic Scholar - Product</u> |
|--|-----------------------------------|
| <u>Academic Search Engine</u> ⊟∍ | <u>Demo</u> ⊟→ |
| (http://Semantic%20Scholar,%20A%20Free%20Al- | (https://www.youtube.com/watch? |
| Powered%20Academic%20Search%20Engine) | <u>v=q1hEO2kUjsl) [</u> 4] |
| [3] | |





6. Jenni.ai

<u>Jenni.ai</u> ⇒ (<u>https://jenni.ai</u>) is an AI-powered writing assistant that helps users create content faster and more efficiently. It offers a range of features, including AI autocomplete, in-text citations, paraphrasing and rewriting, source-based generation, and a chat assistant to help users understand and summarize their research papers. Jenni.ai supports multiple citation styles, including APA, MLA, IEEE, and Harvard, and allows users to save and manage their research in a library for easy citation. With Jenni.ai, users can overcome writer's block and produce high-quality content in less time.



Home page Jenni.ai [7]

Tutorials for Jenni.ai

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      How to use Jenni Al, ⇒
      Jenni Al Review (2023) -

      (https://youtu.be/Qnh6EFtGIFg)
      Should You Get This Al

      Writer? ⇒
      (https://youtu.be/F1ZFXsk6Tcc))

      [8]
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Acknowledgments

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