



# Harnessing AI for Research Funding Success

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Helping Faculty Discover Opportunities &  
Strengthen Proposals

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# Why AI, Why Now?

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Explosion of grant opportunities across federal agencies, foundations, and industry

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Faculty face time constraints in finding and tailoring applications

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AI tools can streamline discovery, analysis, and proposal writing

The background is a dark blue gradient. It features a pattern of light blue question marks of various sizes, some of which are slightly blurred to create a sense of depth. There are also several dotted lines: a vertical one on the left, a horizontal one in the top right, and two large, faint circles that overlap each other in the lower half of the image.

# How Do You Use AI?

## Common Challenges for Faculty

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Difficult to keep up with  
evolving funding calls

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Burden of aligning proposals  
with agency priorities

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Writer's block or repetitive  
drafting tasks

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Administrative complexity in  
compliance and formatting

# What AI Can Do



Discovery: Scan databases and alert faculty to relevant opportunities



Summarization: Translate lengthy solicitations into key requirements; Summarize literature on a topic



Proposal Drafting: Suggest language for aims, broader impacts, or budgets



Editing Support: Improve clarity, tone, and compliance language



Collaboration: Align proposals across interdisciplinary teams

## Tools for Opportunity Identification

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AI-driven search platforms  
(Pivot, GrantForward, AI  
search engines)

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Customized alerts based on  
faculty research profiles

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Prioritization of  
opportunities by relevance,  
deadline, competitiveness

# Tools for Proposal Development

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- **Language support:** ChatGPT, Grammarly
- **Compliance checkers:** Uniform Guidance, federal agency rules
- **Idea development:** brainstorming broader impacts and engagement strategies

# Tools for Identifying Literature

Name of AI Tool	Where to Start	How to Search	Subscription Info
<a href="#">Consensus</a>	Review “ <a href="#">how to search &amp; best practices</a> ” prior to your first search	Enter clear, plain language research question and generate list of relevant peer reviewed manuscripts	Free option with limits; premium subscriptions available
<a href="#">Semantic Scholar</a>	Review “ <a href="#">our product</a> ” prior to first search	Enter keywords, paper titles, author names, or a research question	Free
<a href="#">Elicit</a>	Review “ <a href="#">getting started</a> ” and “ <a href="#">tips and best practices</a> ” prior to first search	Enter clear, plain language research question and generate list of relevant peer reviewed manuscripts	Free option with limits; premium subscriptions available

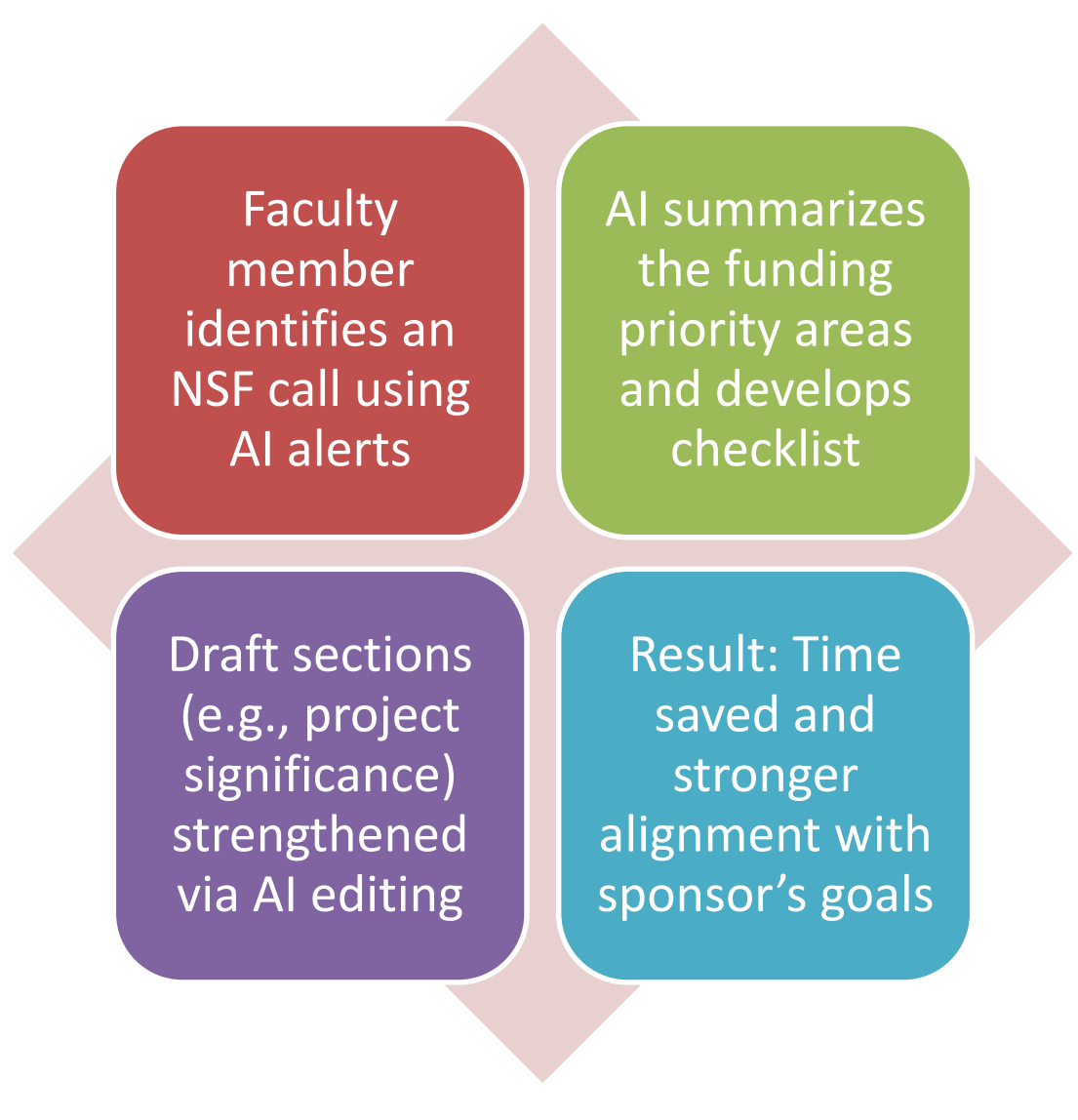


# Literature Tools (continued)

Name of AI Tool	Where to Start	How to Search	Subscription Info
<a href="#">Litmaps</a>	<a href="#">How to use Litmaps, find research gaps &amp; monitor</a>	Enter a source paper to generate a list of related papers based on citations	Free option with limits; premium subscription available
<a href="#">Research Rabbit</a>	<a href="#">Step-by-step guide</a>	Enter a source paper to generate a list of related papers based on citations.	Free
<a href="#">SciSpace</a>	<a href="#">Literature Searches, Chat with PDF, &amp; Live Workshops</a>	Enter research question or keywords to identify literature.	Free option with limits; premium subscription available
<a href="#">ChatPDF</a>	<a href="#">ChatPDF in a Nutshell &amp; Fast &amp; Simple AI PDF Summaries</a>	Upload PDFs, Word documents, and PowerPoint slides	Free option with limits; premium subscription available

Source: University of Maryland, Baltimore, CARTI

# Case Study Example



# Benefits for Faculty

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Save	Save time and reduce stress
Expand	Expand awareness of non-traditional funders
Improve	Improve competitiveness of proposals
Build	Build stronger partnerships with shared AI tools

# Ethical & Practical Considerations

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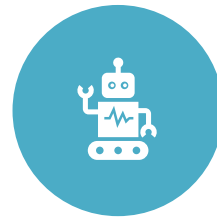
Confidentiality: avoid sensitive data in public AI tools



Accuracy: AI is a partner, not a replacement—always fact-check



Equity: ensure faculty have equal access to training/tools



Compliance: align AI use with sponsor and university policies

## Other Considerations

- TurnItIn (or similar) – looking for meta data and plagiarism, using it can protect you from submitting something unethical
- Disclosing use of AI – you are sometimes asked to disclose if and how you used AI; A suggestion is to create an account in the AI tool that will save your steps, in case you need documentation; also, maintain notes and files
- Novelty – if AI returns language similar to your prompts, your proposed question may not be novel

# Interactive Exercises: Choose 1

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Exercise 1	Use an AI tool to summarize a sample grant solicitation
Exercise 2	Brainstorm broader impacts for a project idea using AI
Exercise 3	Refine a draft paragraph for clarity and compliance with AI assistance
Discussion	Share experiences and insights with peers