Navigating the AI-Driven Academic Frontier: Tools and Initiatives

Initiatives, resources and tools to proactively assist learners and researchers navigate an increasingly AI-powered environment.

CNI Fall 2023 Membership Meeting
December 12, 2023

Panelists

1. **Joelen Pastva,**
   Director of Library Services, Carnegie Mellon University

1. **Benjamin Shaw**
   Teaching and Learning Librarian, University of Maryland

1. **Leo Lo**
   Dean of the College of University Libraries and Learning Sciences, The University of New Mexico

1. **Elias Tzoc**
   Associate Dean for Teaching, Learning and Research, Clemson University

Keenious at CMU Libraries

Joelen Pastva, Director of Library Services

Carnegie Mellon University Libraries

Carnegie Mellon University Overview

- Private university in Pittsburgh, PA
- 14,500 students
- 1,300 faculty
- Top programs in computer science, IT, information systems, engineering, drama, and design
- Strong interdisciplinary culture
- Birthplace of AI

➔Increase pathways for users to discover and access library resources

➔Meet users where they are

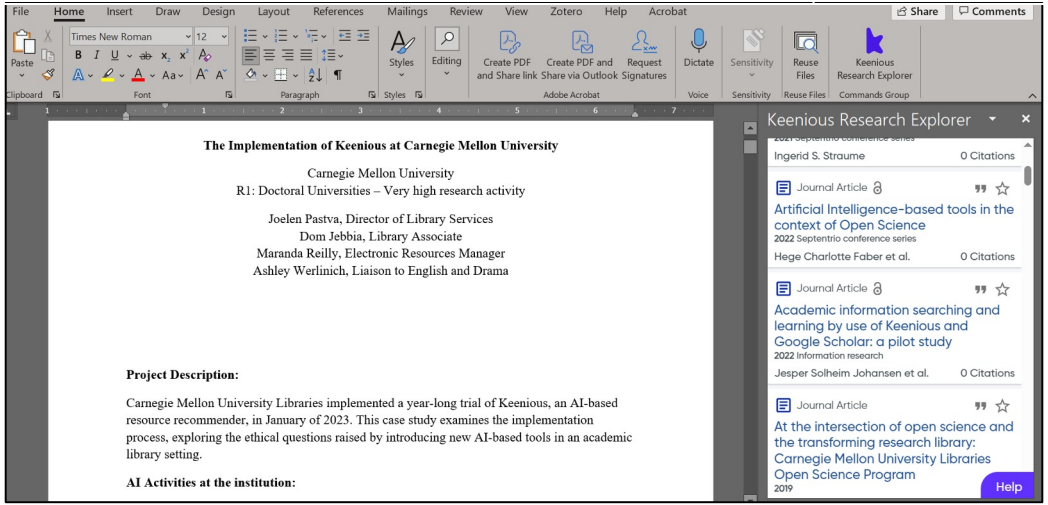
➔Help researchers identify relevant topics for improved searching

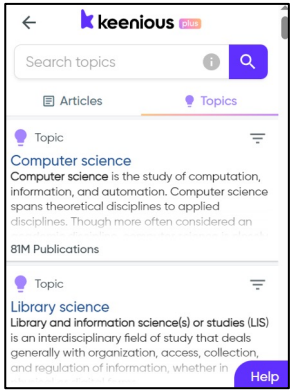
keenious

Recommender tool powered by AI to assist in the discovery of relevant scholarly articles by analyzing text inputs.

Implementation questions/concerns

- Data sources
- Algorithmic transparency
- Assessment options
- User and data privacy
- Impact on research process
- Product roadmap





Measuring impact

1) User retention
2) Total unique users
3) Link resolver clicks

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Cohort	Size	Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Sep 16	10	100.0%	80.0%	80.0%	70.0%	20.0%	20.0%	70.0%	50.0%	70.0%	50.0%	20.0%
Sep 23	8	100.0%	75.0%	12.5%	12.5%	25.0%	62.5%	25.0%	62.5%	37.5%	25.0%	
Sep 30	9	100.0%	55.6%	11.1%	11.1%	22.2%	11.1%	22.2%	11.1%	0.0%		
Oct 7	10	100.0%	0.0%	10.0%	10.0%	10.0%	10.0%	0.0%	0.0%			
Oct 14	3	100.0%	33.3%	33.3%	33.3%	0.0%	0.0%	0.0%				
Oct 21	35	100.0%	17.1%	11.4%	8.6%	5.7%	8.6%					
Oct 28	70	100.0%	24.3%	20.0%	7.1%	10.0%						
Nov 4	20	100.0%	25.0%	5.0%	0.0%							
Nov 11	4	100.0%	0.0%	0.0%								
Nov 18	2	100.0%	0.0%									
Nov 25	18	100.0%										

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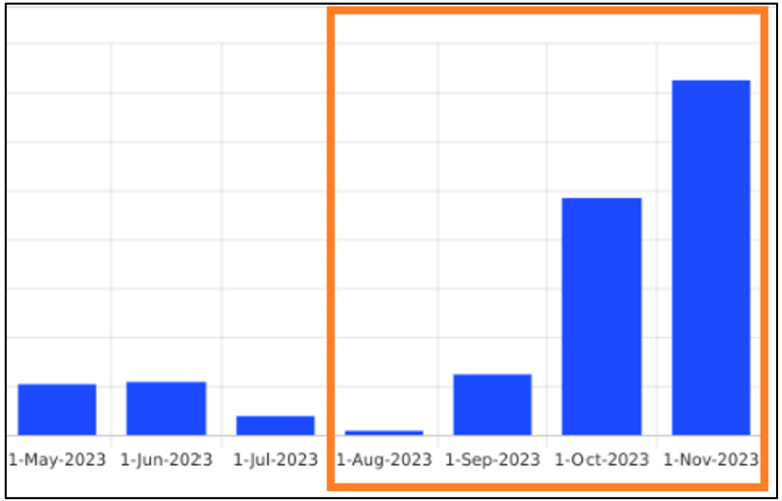

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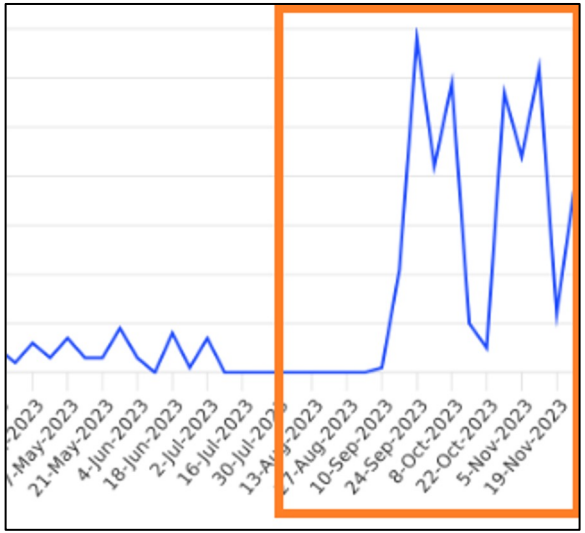


AI & Information Literacy Module

Benjamin Shaw, Teaching and Learning Librarian

University of Maryland, College Park

UNIVERSITY LIBRARIES

University of Maryland context

- R1 state school, 30,000 undergraduates, 9,800 graduate students, 2,500 faculty
- Teaching and Learning Services at UMD Libraries - first-year library instruction, including source evaluation and information literacy
- Uncertainty around generative AI among faculty and librarians
- Demonstrated information literacy gaps around AI - both students and faculty
- **Intervention:** create a Canvas module that can be integrated into any course on campus, partnership between the Libraries and the Teaching and Learning Transformation Center

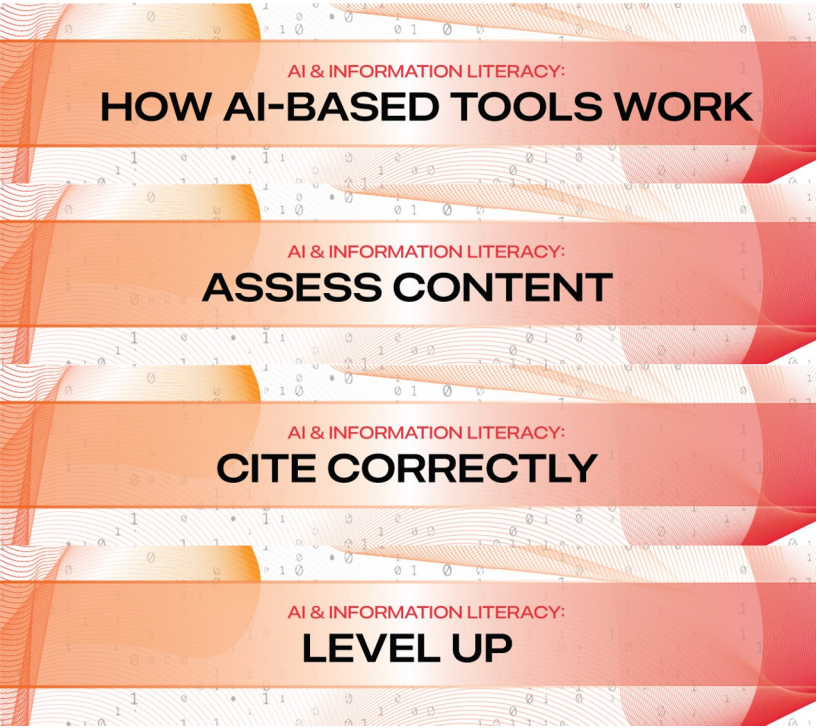
Goals for the project

- Address information literacy gaps
- Conversation about plagiarism → informed users of new technology
- Reach broad variety of students without alienating them
- Easily integratable, widely applicable resource
- Practical skills not bound to any particular AI tool, as evergreen as possible

Methodology

- Conversations with faculty and students, frequently received questions, experimentation with generative AI
- Work from existing resources and info lit concepts
- Bounds: AI & information literacy in context of university assignments and research

Contents of the module



- **Basics of how AI works**
  - AI tools, basic mechanics
  - Bias, labor, privacy
- **Fact-checking**
  - Common errors made by text-based AI
  - Lateral reading exercises
- **Citation styles**
- **Resources to explore further**
  - AI tool round-up, DALL-E prompt book, suggestions for usage

Impact

120 courses imported the module;
2293 views on our companion LibGuide

Testimony from faculty and students was overwhelmingly positive; other institutions have integrated into curriculum

Next steps

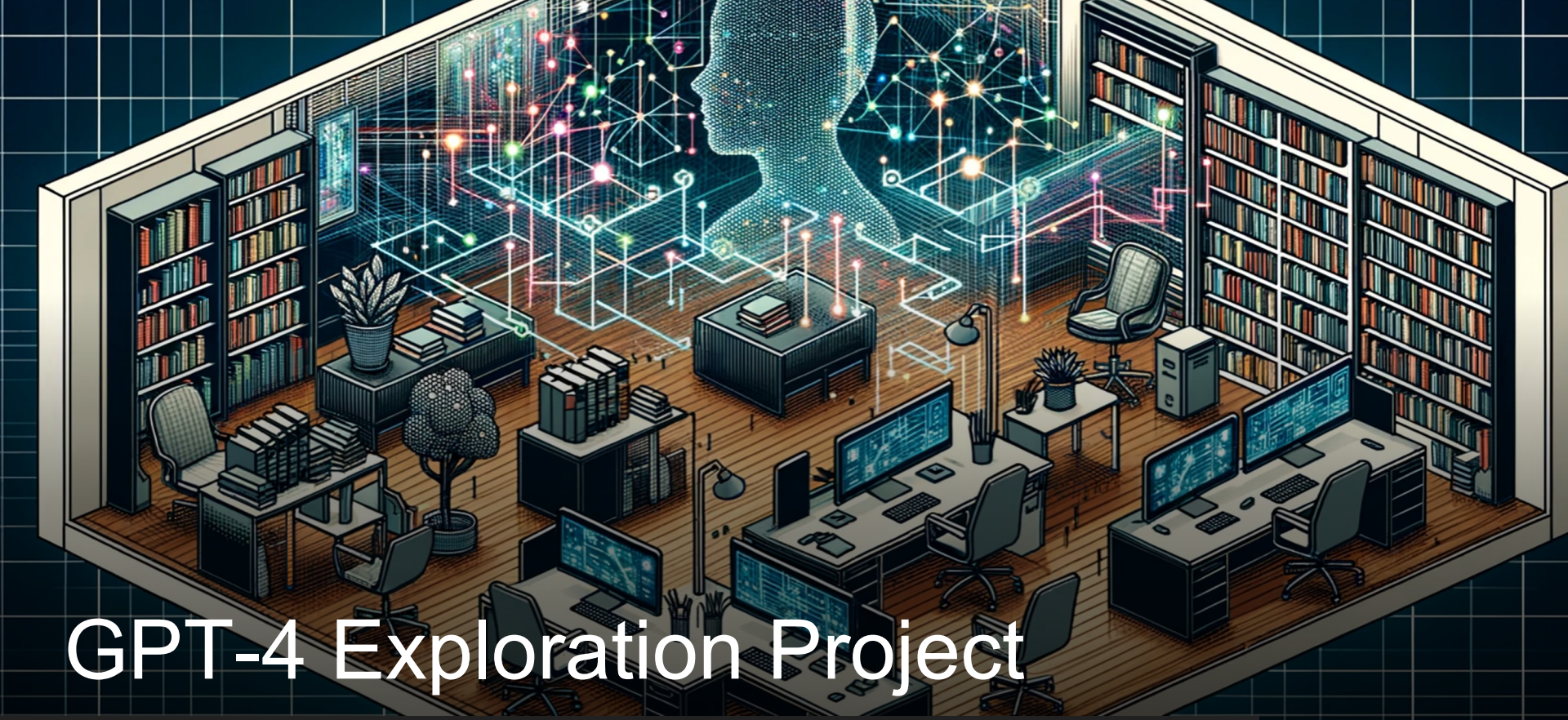
- Survey instructors on module usage
- Updating with new skills on AI content in “the wild”

Special thanks to my co-authors:
Mona Thompson, Senior Education Development Specialist
Daria Yocco, Graduate Assistant for Teaching and Learning

The Institute for Trustworthy AI in Law and Society (TRAILS)

bit.ly/AI-ELMS - **Explore the module**

Contact me: **bshaw1@umd.edu**



GPT-4 Exploration Project

the College of University Libraries & Learning Sciences, University of New Mexico

Presenter: Leo Lo

Leading the Way: Insights from a Generative AI Experimentation

- Enhance capabilities - Find practical applications of AI that can improve workflows, services, etc.
- Develop proficiency - Gain hands-on skills with generative AI tools through projects.
- Seed innovation - Create a culture that is open to experimenting with and adopting new technologies proactively.

The Explorers

The Participants:

- 10 interdisciplinary professionals from libraries, technology, and learning design
- Mix of skill levels
- Attitudes spanned skepticism to enthusiasm about AI

Their Projects:

- Generative AI for research data plans and manuscript drafting
- AI tools for instructional content creation and student support
- Using AI in cataloging, metadata, and collection management
- Testing AI capabilities for generating FAQs
- AI for enhancing library communications and patron interactions
- Dean’s assistant’s virtual assistant

Program Outcomes

Pre-Program:

- Average familiarity with AI tools was 2.36 out of 5
- Average self-rated AI literacy was 2.45 out of 5

Post-Program:

- **Familiarity increased** to average of 3.63 out of 5
- **AI Literacy increased** to average of 3.38 out of 5
- Main challenges: **technical limitations, prompt engineering**
- Participants gained skills in prompt crafting and assessing AI capabilities/limitations
- **Confidence in using AI tools increased** from average of 3.1 to 4 out of 5
- Program rated 4.75 out of 5 for effectively meeting goals

Testimonials:

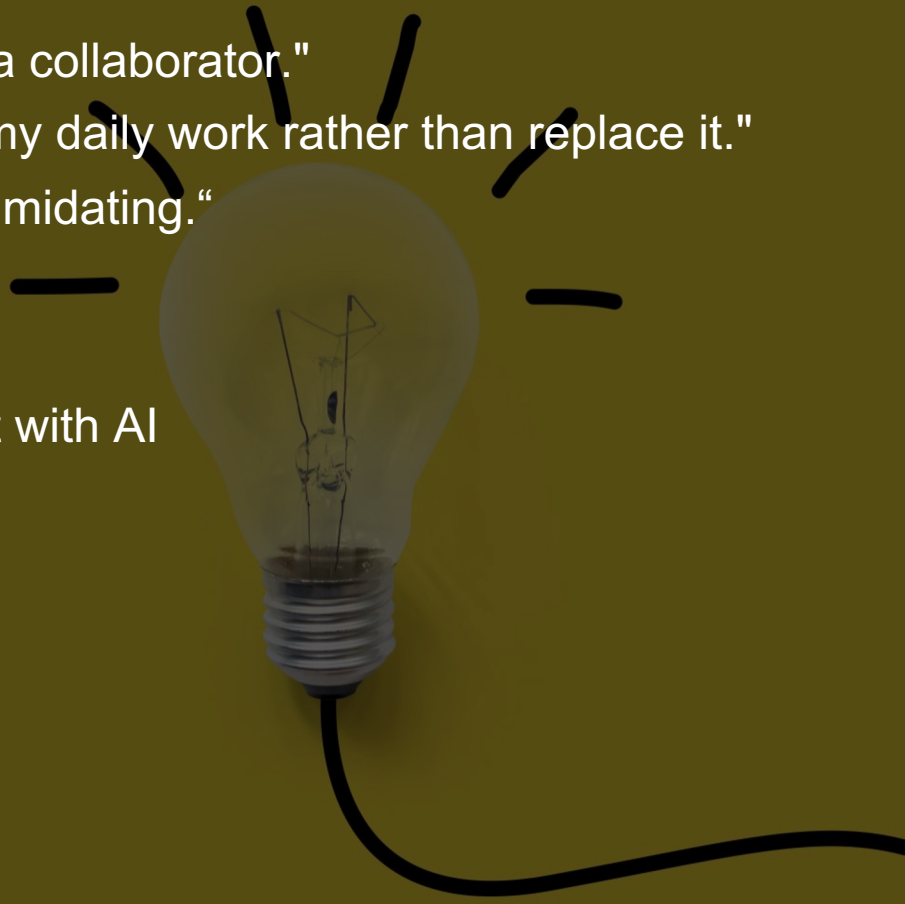
- "This program changed AI from a threat into a collaborator."
- "I gained confidence in using AI to enhance my daily work rather than replace it."
- "The freedom to experiment made AI less intimidating.“

Key Learnings:

- Hands-on experimentation increased comfort with AI
- Prompt practice built critical skills
- Tailored projects amplified engagement

Challenges:

- Data privacy concerns
- Prompt engineering difficult but essential
- AI lacked subject matter expertise



CLEMSON UNIVERSITY

AI-powered tool subscription

scite_

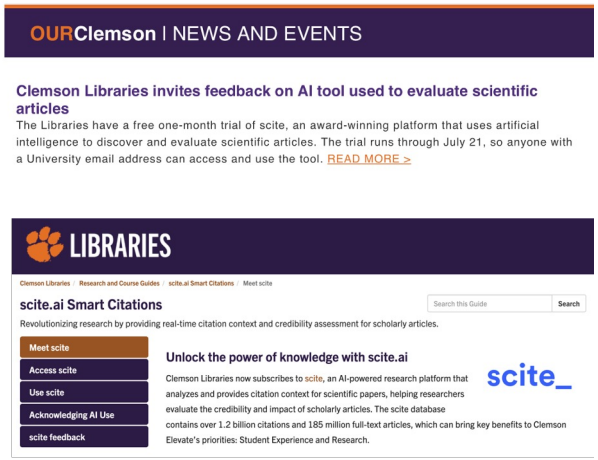
Elias Tzoc
Associate Dean for Teaching, Learning and Research
Clemson University Libraries

WHY did we start?

- University Strategic Plan
- Library's mission
- Increase in reference questions
- Help with AI awareness

WHAT did we do?

- Talked to colleagues at other institutions
- Arranged demos and trials
- Recommended a one-year subscription
- Created PR campaign and research guide

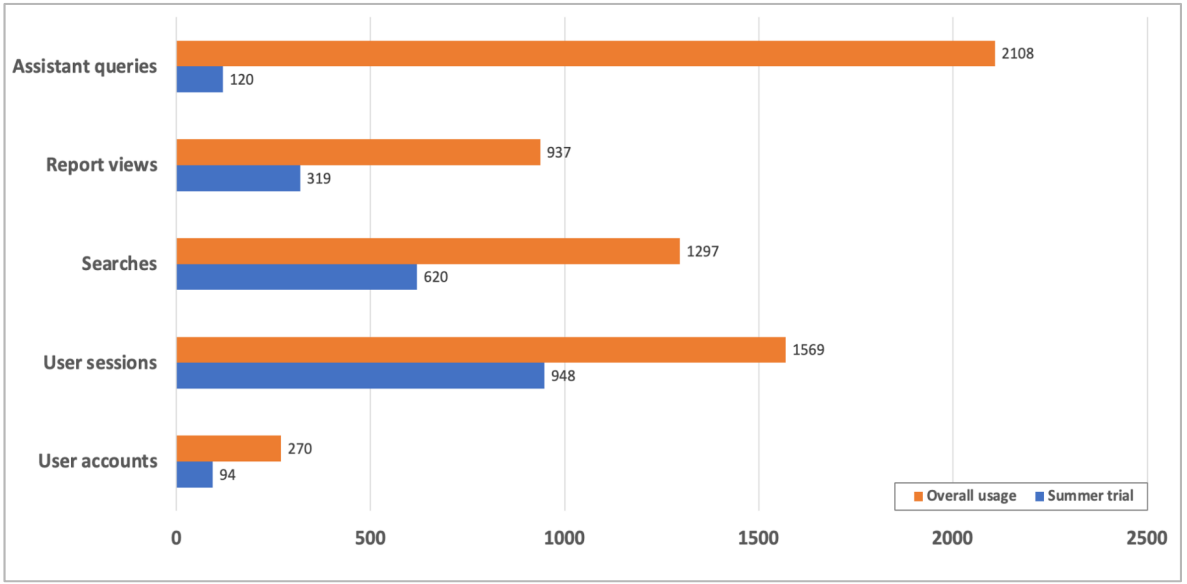


ENGAGEMENT

Trial: June 20 - July 20 | Subscription: September 1 | Official Launch: October 1

Trial feedback
- 5 colleges
- 11 departments
- 14 completed forms
- 50% faculty
- 50% grad students
- 4.57/5.00

Research Guide
1469 views



HOW are we going to continue?

- Marketing and promotion
- Teaching and presenting
- Assessment and feedback
- Stay tuned!

News

Top 5 AI Tools for Academic Research

The Best AI tools for college students

AI tools for education

The Impact of AI on Teaching and Learning

Questions?