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
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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
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
AI & Information Literacy Module

Benjamin Shaw, Teaching and Learning Librarian

University of Maryland, College Park
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

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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
AI-powered tool subscription

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

Research Guide
1469 views

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

Assistant queries
- Overall usage: 2108
- Summer trial: 120

Report views
- Overall usage: 937
- Summer trial: 319

Searches
- Overall usage: 1297
- Summer trial: 620

User sessions
- Overall usage: 1569
- Summer trial: 948

User accounts
- Overall usage: 270
- Summer trial: 94
HOW are we going to continue?

• Marketing and promotion
• Teaching and presenting
• Assessment and feedback
• Stay tuned!
Questions?