# 2026 Research Showcase Presentations

## Presentation Session 1: 1:00-2:00 p.m.

**“Public Library Services for Older Adults in the AI Era: Gaps and Research Design”**

Presenters: Jiangping Chen, Carolyn Cullen

Public libraries are critical community infrastructure supporting the well-being, inclusion, and lifelong learning of older adults—a population that is rapidly expanding in both size and diversity. Older adults frequently encounter barriers such as limited access to broadband and devices, age-related changes in cognition or mobility, and increased exposure to misinformation and fraud. This presentation reports a three-year IMLS national leadership research project collaborating with the Queens College at the City University of New York to strengthen public library services for older adults. We have identified a few gaps from literature that this project will address: a lack of systematic research on older adults’ needs and the barriers they encounter when assessing and using library services, a lack of AI and information literacy training for older adults that limit their ability to critically evaluate information on social media and generated by AI, a lack of systematic understanding of how public libraries currently serve older adults, and librarians’ lacking essential knowledge and skills to develop and deliver effective services and programs for older adults.This project applies a mixed method research design to collect data from older adults, librarians and library administrators through surveys, interviews, the development of training materials, and the assessment of these materials in partner libraries. It will identify the information needs of older adults, examine current public library services for this population, and develop training materials for librarians as well as literacy courses for older adults. Public libraries, librarians, and patrons will benefit from the project’s deliverables and outcomes, which include new models and strategies for serving older adults in the AI era, librarian training materials, literacy courses, and evidence-based recommendations to inform user service policy and practice.

**“From Medical Conversations to Clinical Documentation: Developing PRISM, an AI-Supported Platform for Clinical Education”**

Presenter: Keith Jacobs

Accurate clinical documentation requires clinicians to simultaneously engage with patients, identify relevant information, and translate conversational encounters into structured medical records. Advances in automatic speech recognition (ASR) and artificial intelligence offer opportunities to support this process, but effective systems must preserve clinically meaningful information while supporting rather than replacing clinical reasoning.This presentation describes research leading to the development of PRISM, an AI-supported platform for clinical documentation and medical education. Initial work evaluated AI-based transcription using 272 simulated medical interviews and developed a pipeline incorporating ASR, patient–clinician speaker differentiation, natural language processing, and structured extraction of clinical information. Evaluation demonstrated an average word error rate of 10.4% while maintaining an average semantic similarity of 0.99. This contrast suggests that clinically meaningful

content may remain highly preserved even when verbatim transcription is imperfect and helped inform the subsequent development of PRISM.PRISM extends this work beyond transcription into an interactive learning environment. The platform processes recorded clinical encounters into speaker differentiated transcripts and structured clinical information while allowing students to create and revise their own documentation. PRISM then provides feedback identifying potential omissions, strengths, and areas for improvement. An instructor interface supports review of student documentation, encounter transcripts, communication assessments, and measures related to documentation and evaluation time.The presentation will trace the progression from initial transcription experiments to the current PRISM platform and conclude with a demonstration of its student and instructor workflows. The next phase of this research will evaluate how AI supported documentation affects clinical documentation quality, student engagement, workload, and faculty evaluation.

**“Exploring Links Between Informal Learning, Library Provision, and Recidivism Rates in the USA (1974 to 2024)”**

Presenters: Kaden Kirtley, Victoria Van Hyning, Travis Wagner, Chris Bailey

We propose a thematic scoping review of informal learning and library provision in United States carceral facilities over the last fifty years of mass incarceration (1974 to 2024). We will explore the impacts of library provision and informal learning opportunities in carceral facilities--i.e. leisure reading and programs that do not award degrees or other certifications--on recidivism rates. We anticipate finding a general consensus among library, information, and education scholars and practitioners that increased opportunities for informal learning results in reduced recidivism rates, but we hypothesize that there is a lack of conclusive evidence of a causal relationship due to small sample sizes for each study or article and the likelihood that carceral and detention facility librarians and outside providers rarely track recidivism at the facility level. We will gather information about how recidivism has been discussed in research and practice in the American context from scholarly publications such as Library Quarterly and The Journal of Prison Education Research (formerly The Journal of Prison Education and Reentry), and relevant trade publications such as the American Library Association's magazine, and policy documents. Despite expectations of evidentiary gaps, particularly regarding the impact of such informal learning on recidivism, we hope to identify promising interventions in the literature, and build a foundation for future research, and evidence-based practice.

**“The Future of Information Lab: Envisioning Purposeful and Trustworthy Online Information Ecosystems”**

Presenters: Marianne Aubin Le Quéré, Hui En Loo

This talk will provide an introduction to the work happening at the Future of Information Lab (FoIL) at the UIUC iSchool. Our primary aim as a group is to help people sustain an intentional and fulfilling relationship with their civic information environment in the generative AI age. We will orient the audience to our research approach, which uses mixed-methods to bridge human-computer interaction, computational social science, and communication/journalism. Our research aims include: (1)

empowering users to exert agency over their information environments, (2) building trustworthy AI-mediated information ecosystems, and (3) developing user-centered measures of information environments with AI. To demonstrate the types of problems we seek to pursue, we will showcase one specific work-in-progress: the exploration of personalized, agentic newsfeeds, which can flexibly adapt to participants' preferences for receiving news and civic information. These feeds represent the future of how people might interact with civic information through AI systems, and are a compelling way people can receive key civic information in increasingly personalized, interactive, inclusive, and less overwhelming ways. Nonetheless, this study also explores how such a shift in information consumption may potentially threaten epistemological processes, sustainable business models for media companies, and transparency between journalists and news consumers.This study represents only one example of an expansive research agenda spanning multiple methodologies. I hope to recruit interests undergraduate and graduate students to work with us in future semesters.

## Presentation Session 2: 2:15-3:15 p.m.

**"Generative World Models"**

Presenter: Ismini Lourentzou

How can AI anticipate what will happen when we act on the world? Generating a convincing video requires capturing how a scene might look, but supporting physical interaction also requires understanding how actions change objects, environments, and the information available to an agent. This presentation introduces research from the Perception and LANguage (PLAN) Lab on generative models that connect visual predictions with physical actions. We investigate how language can guide the generation of dynamic scenes, how world models can anticipate interactions, and how robots can combine vision and touch to predict the consequences of manipulation. These directions address a shared challenge: maintaining a coherent understanding of the world as both the environment and the agent's observations change. Through visual examples from recent and ongoing projects, I will illustrate progress toward models that can generate possible futures and inform action. This work connects generative AI with robotics and interactive systems, with the broader goal of helping machines interpret task goals and act effectively in everyday environments.

**"The Illinois Health Explorer: Helping the Illinois Department of Public Health Understand the Impact of Extreme Weather"**

Ian Brooks

The iSchool's Center for Health Informatics, Illinois Department of Public Health, University of Illinois System, NCSA and Prairie Research Institute are working together to help state and local health departments understand, respond to, and communicate about the impact of extreme weather events on the health of the Illinois population. This project has developed an informatics framework, the Illinois Health Explorer, that combines health and environmental data with an interface designed to allow users to visualize and analyze relationships between environmental factors and health outcomes. To inform the design of the Explorer, we conducted a comprehensive analysis of existing climate and health tools and

research. We supplemented this work by conducting interviews and focus groups with public health officials across Illinois to assess their information needs and priorities. The findings highlighted the need for a user-friendly system that provides equity-focused, actionable information to support tracking, reporting, decision-making, and communication with the public. The resulting platform brings together data that are typically maintained in separate systems, including hospital visits, weather conditions, air quality, and measures of social and environmental vulnerability. Initial predictive models focus on the effects of extreme heat and air quality on hospital visits and use both traditional time-series and machine-learning approaches. We will present results from modeling recent extreme heat waves and discuss how these results are being incorporated into the Explorer. This project demonstrates how the integration, analysis, visualization, and communication of data from multiple sources can support the development of an actionable information system for local decision-making.

**“Governing Communities for Digital Preservation of Indigenous Knowledge”**

Presenters: Gladys Kemboi, Karen Wickett

Digital curation and preservation of Indigenous knowledge (IK) has become a global concern in health, education, agriculture, and climate change. Yet Indigenous communities still face limitations in accessing digital technologies and services, and community archives in African countries are facing considerable challenges. In particular, Indigenous medicinal knowledge is at risk. Approaches for designing information and knowledge systems for preserving digital objects or knowledge products require specialized knowledge, and there is no single method in the digital environment for identifying which properties are considered significant for preserving Indigenous medicinal knowledge.

This situation has contributed to the exclusion of Indigenous knowledge and health practices in digital infrastructures and archives. Given the technical complexity of digital objects and the requirements of digital preservation systems, Indigenous knowledge contributions, experiences, and expertise are excluded and sometimes rendered invisible. In this presentation, we use examples of digital objects related to Indigenous communities in Africa as examples to understand the significant properties and levels in digital objects when preserving Indigenous knowledge.

However, a focus on technical issues of preservation leaves open important governance questions for preserving Indigenous knowledge. Who participates in the design of information systems for preserving knowledge? Who describes the significant properties and community narratives for preserving digital objects in institutionalized arrangements? We propose the concept of the Governing Community as an extension of the Designated Community from the Open Archival Information System (OAIS) Reference Model. In this governing community, the members do not merely receive or understand preserved information; its members participate and contribute in determining what should be digitized, how it should be described, which properties are significant, and how data, information, and knowledge should be accessed, reused, and governed to benefit the community.

**“Making Future Spaces Discussable: Information Practices in Landscape Architecture Critiques”**

Min-Seok Choi

How do people interpret visual information about spaces that do not yet exist, and how do students participate in this work? This presentation examines landscape architecture critiques as a setting in which drawings, models, and imagined scenarios become resources for constructing and examining professional explanations. Drawing on interactional ethnography and multimodal discourse analysis, the study examines a semester-long undergraduate studio, focusing on one student’s desk critiques and final review, alongside public instruction and a group critique. Intertextual analysis traces how participants connect accounts of design with accounts of anticipated use, examine their implications, and develop them through talk, gesture, and engagement with representations. The findings show that these connections help specify both a design problem and the explanatory work expected of students. A proposed trajectory becomes grounds for examining restricted movement and recommending a physical barrier. An account of shared and diverging passage establishes a need for graphic differentiation. A question about a starting area becomes more specific as participants describe the preparations preceding departure. Across these encounters, students contribute by proposing arrangements, questioning assumptions, correcting interpretations, and confirming implications. Instructors and peers elaborate accounts and formulate further work, with some tasks remaining unfinished in the displayed exchanges. The study contributes to research on information practices by showing how anticipated use makes particular features of visual information relevant to professional judgment. As participants examine these relations, they also establish what counts as an adequate explanation and who should develop it further. Learning opportunities emerge through participation in this interpretive work, as students are positioned to relate representations to use, examine consequences, and revise explanations with others.