AI in Education Session

2023 Commonwealth Computational Summit

October 16 | Gatton Student Center Ballroom | 1:00-5:30

Open access to generative AI since late 2022 has energized the conversation on opportunities for innovation and transformation in how we teach and learn. The AI in Education session at the Commonwealth Computational Summit will explore curricular design; teaching strategies; student learning; case studies in specific disciplines, programs, and courses; and questions about the theories, practices, and the possible futures of education.

See the full Summit program and other information at https://summit.ccs.uky.edu/ccs_summit/

Goals for AI in Education Session

- Assess the ongoing impact of AI technologies on education, particularly for curricular design, teaching practices, and student learning.
- Share innovations and approaches to how educators might engage with AI technologies in ways that advance student learning and success.
- Ground the uses of AI in education in relation to needs, issues, and opportunities in teaching and learning.
- Consider future directions for educational theories and practices in the Commonwealth.

1:00 — AI & the Futures of Teaching & Learning: Discussion & Town Hall

Trey Conatser
Director, Center for the Enhancement of Learning and Teaching, University of Kentucky

Leah Parsons Simpson
Executive Director of Online Learning & Faculty Development, Kentucky Community and Technical College System

1:45 — Break

2:00 — Presentations: Research & Scholarship on AI in Education

“Charting the Digital Discourse: Understanding the Research and Instructional Value of Discursive Exchanges with AI”

C. Sean Burns
Associate Professor, School of Information Sciences, University of Kentucky

This project seeks to systematically study the benefits, dynamics, and potential pitfalls of engaging in discursive exchanges with AI as a research tool. Our questions include: How do AI-enabled exchanges influence the conceptualization and elaboration of research topics? Are there patterns in these discussions that can be harnessed to refine research methodologies? And importantly, what are the limitations and challenges posed by such interactions? This study seeks to provide researchers, instructors, and students with insights into how AI can be utilized as a collaborative thought partner, potentially reshaping the contours of academic inquiry and instruction in the digital age.

“Empowering Education with AI: Unveiling Mark, Your Virtual Teaching Assistant”

Yongsheng Lian
Professor, Department of Mechanical Engineering, University of Louisville

In today's rapidly evolving educational landscape, harnessing the power of AI to foster student engagement and facilitate learning is paramount. However, there are concerns that the AI tools may give incorrect answers. To address that problem, we built a platform that enables educators to create their own interactive AI assistants tailored to their classroom needs. This platform addresses several key challenges faced by educators: accessibility, content control, and monitoring and improvement. In this talk we will share our experiences with AI in the classroom.

“The Ethics of AI Chatbots from a First-Year Engineering Student Perspective: Surveys and Course Developments”

Campbell Bego
Assistant Professor, Department of Engineering Fundamentals, University of Louisville

Understanding baseline student perspectives is critical to determining what instruction is needed alongside the newly-available AI chatbot tools. First-year engineering students were surveyed about their use of AI chatbots. Based on the results, a subsequent team project was modified to include the use of AI chatbots in a strategic way. This procedure highlighted limitations as well as benefits of chatbots for programming, as well as diverse perspectives among students. In a later semester, AI chatbots were integrated into a team project as a research and writing aid. Survey results again revealed a wide variety of ethical opinions. The results suggest that instructional standards should encourage students to explore new tools without circumventing their learning.

“Student Use of AI in Creating Research Papers”
Kimberlee Everson
Associate Professor, School of Leadership and Professional Studies, Western Kentucky University

This study examines student viewpoints about the potential uses and misuses of generative AI in creating research papers. Participants are undergraduate juniors and seniors as well as graduate students who were enrolled in research methods and/or AI courses in Kentucky. From the resulting analysis student viewpoints were identified and further analyzed for meaning using a qualitative approach in order to describe them richly. These viewpoint descriptions can be used to help in the design of curriculum and/or processes for writing student research papers, theses, and dissertations with AI, without sacrificing student development.

“Generative AI for Medical Device Design”
Kristi Bartlett
Assistant Professor, Department of Product Design, University of Kentucky

This talk will describe an application of generative AI to a student project in a course with third-year product design students and fourth-year biomedical engineering students, and representatives from UK Healthcare. Using Vizcom, a generative AI software, students transform hand-drawn sketches into high-fidelity renderings to explore design concepts. In this project I seek to understand whether Vizcom helps students to generate design ideas more quickly, to broaden their thinking, or to communicate their ideas more clearly with the clinical stakeholders. I also seek to identify whether Vizcom plays any negative role for student learning. My talk will cover the current project status and initial findings.

3:15 — Break

3:30 — Lightning Talks: Uses & Applications of Generative AI in Education

“Preparing Our Students for an AI-Enhanced Workplace”
Lisa Blue
Instructional Specialist: STEM-H Teaching and Learning, Faculty Center for Teaching and Learning, Eastern Kentucky University

While it’s challenging to predict the myriad discipline-specific impacts Generative AI technologies will have on our students’ future careers, we can work with students now to familiarize them with the rapidly evolving “jagged edge” of AI capabilities to improve their competitiveness in the job market post-graduation.

“Correcting Chat: A Model for Take-Home Essays”

Jaclyn Johnson
Lecturer, Department of Political Science, University of Kentucky

ChatGPT has been viewed as a threat to instructors who use take-home essay exams as their primary form of assessment. To address this issue, I have developed a new type of essay prompt that embraces ChatGPT instead of ignoring it or viewing it as a threat to learning. This exercise shows students the limitations of ChatGPT and encourages them to synthesize class content. The presentation will feature comparisons of ChatGPT output and student submissions, which show progress and learning between the drafts.

“ChatGPT: An Accelerator of Creative Ideas”

Katie Mullen
Lecturer, Department of Arts Administration, University of Kentucky

From brainstorming new course concepts to determining learning objectives to include in a specific course, to the creation of case studies and project ideas, ChatGPT can help educators generate a greater volume of ideas in less time. In my lightning talk, I will share my process for drafting prompts and responses in ChatGPT for the development of course content, and will share examples of applications in curriculum development.

“ChatGPT and Research Methods in the Psychology Classroom”

Iva Katzarska-Miller
Professor of Psychology, Transylvania University

This talk will discuss the application of ChatGPT in a psychology research methods class at a small liberal arts institution to achieve two learning outcomes: (1) analyze and evaluate generative AI produced material, and (2) develop generative AI literacy skills. In particular I will focus on a list of specific activities using ChatGPT and student responses to them in ways that invite application in other disciplines as well.

“AI in Practice Reflection: Using Classroom Applications to Combat Industry Challenges”

Winter Phong
Assistant Professor, Department of Arts Administration, University of Kentucky

Beleaguered by deadlines and increasing fundraising goals, development and advancement departments must develop strategies to combat salary compression, rising costs, and increasing workloads. Nonprofit employees, board members, and volunteers must navigate strategies to improve fundraising efforts. Generative AI offers the potential to examine uses in fundraising via collaborative learning and writing with GenAI.

“Announcing the Planned UK AI Certificate”

Judy Goldsmith

Professor, Department of Computer Science, University of Kentucky

The University of Kentucky Department of Computer Science is proposing an AI certificate aimed at undergraduates from across campus. This program will include classes about AI in society, ethics, and, of course, use of generative AI (as well as a variety of AI-related electives). This talk will present the proposal with brief descriptions of two proposed courses: Generative Machine Learning and AI in the World.

4:30 — Discussion, Networking, First Day Closing Reception

Thanks to our platinum sponsor DELL!

5:30 — Conclude