

Reflective Questions

to Guide Student and
Faculty Members
in AI Use



[CUR.org/PositionStatements](https://cur.org/PositionStatements)

PREPARED BY THE CUR AI WORK GROUP

This document is prepared by the CUR AI Work Group 2025-2026, charged by the CUR Council. The goal of this document is to develop reflective questions that guide student researchers and faculty mentors in ethical and appropriate use of AI when conducting undergraduate research. It is intended for researchers to use the checklist and more detailed reflective questions to prompt individuals' critical thinking before adopting the Generative Artificial Intelligence (Gen AI) as tools in facilitating their research process.

These guidelines were drafted based on feedback from CUR division members across numerous disciplines, a survey sent by CUR. Qualitative responses were summarized by two Gen AI tools (CoPilot and ChatGPT) first. The group edited and finalized these reflective questions by aligning the prompts with the initial two subgroups' goals of appropriate and ethical use of Gen AI and security of data. The Work Group acknowledges that these dynamic GenAI tools are evolving at a fast pace. Therefore, these reflective questions are general prompts that require updates periodically.

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WANT MORE IN AI?



Artificial intelligence is rapidly transforming how knowledge is created, evaluated, and applied, raising important questions about how higher education prepares students for the future. CUR released a position statement affirming that undergraduate research provides a powerful framework for addressing these challenges, equipping students with critical thinking, ethical reasoning, collaboration, and problem-solving skills that AI cannot replace. Scan the QR code and download additional AI resources, including the position statement.



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RESPONSIBLE USE OF AI IN UNDERGRADUATE RESEARCH: STUDENT CHECKLIST

BACKGROUND

This is a concise, practical checklist for students. It was designed for quick reference when planning, conducting, or reviewing undergraduate research involving AI tools.

Remember: You, not the AI, are the researcher and author!

Purpose + Learning

- ☐ I can clearly explain why I am using AI for this task
- ☐ AI supports my learning and inquiry rather than replacing my thinking

Academic Integrity + Disclosure

- ☐ I disclosed all AI tools used and described how they were used
- ☐ My AI use aligns with my instructor's or research mentor's expectations

Accuracy + Bias

- ☐ I verified AI-generated information using peer-reviewed or authoritative sources
- ☐ I considered possible bias, errors, or hallucinations in AI outputs

Discipline-Specific Ethics

- ☐ I followed ethical and professional guidelines relevant to my discipline
- ☐ I confirmed that AI use is appropriate for my research methods

Data Privacy + Security

- ☐ I did not upload sensitive, personal, or restricted data into public AI tools
- ☐ I used institutionally approved or permitted AI platforms when required

Skill Development

- ☐ I practiced essential research skills independently before using AI
- ☐ AI helped me learn rather than bypass core research skills

Human Responsibility

- ☐ I made the final decisions about analysis, interpretation, and conclusions
- ☐ I take full responsibility for all AI-assisted content in my work

RESPONSIBLE USE OF AI IN UNDERGRADUATE RESEARCH: FACULTY CHECKLIST

BACKGROUND

This is a concise, practical checklist for faculty and mentors. It was designed for use when mentoring, designing assignments, or reviewing AI-supported research.

Remember: You, not the AI, are the mentor guiding students in undergraduate research!

Learning Goals + Boundaries

- ☐ AI use aligns with stated learning outcomes
- ☐ Clear boundaries exist for acceptable and unacceptable AI use

Academic Integrity + Transparency

- ☐ Expectations for AI disclosure are clearly communicated
- ☐ Guidance helps students distinguish support tools from authorship substitution

Quality, Accuracy + Bias

- ☐ Students are required to verify AI-generated outputs
- ☐ Bias, hallucination, and accuracy risks are explicitly addressed

Discipline-Specific + Ethical Standards

- ☐ Relevant professional and ethical standards are applied
- ☐ AI use aligns with disciplinary and methodological norms

Privacy, FERPA + IRB Considerations

- ☐ AI use complies with FERPA, IRB, and data security requirements
- ☐ Approved or secure AI platforms are identified for student use

Mentorship + Skill Development

- ☐ Students receive guidance on responsible AI use
- ☐ Assessment emphasizes reasoning, process, and learning—not tool use alone

Accountability + Oversight

- ☐ Human judgment is required for interpretation and conclusions
- ☐ Responsibility for AI-assisted work is clearly defined

Broader Impacts

- ☐ Environmental, equity, and accessibility implications are considered
- ☐ AI use aligns with institutional values and research ethics

GENERAL GUIDING QUESTIONS FOR AI USE WHEN CONDUCTING UNDERGRADUATE RESEARCH

Purpose and Appropriateness of AI Use

- What problem am I trying to solve by using AI, and is AI the right or best tool for this task?
- Does my use of AI support learning and inquiry, or does it replace essential intellectual work?
- How does AI enhance, rather than diminish, my role as a researcher?
- Would I be comfortable explaining and defending my AI use to a faculty mentor or review board?

Academic Integrity and Transparency

- Have I clearly disclosed how and where AI tools were used in my research process, and included the citations of AI generated sources?
- Which aspects of this research project must remain entirely my own to meet academic integrity standards?
- How can I distinguish between acceptable AI assistance (e.g., editing) and unacceptable substitution of authorship?
- What documentation would allow others to understand and reproduce my AI-assisted work?

Accuracy, Bias, and Verification

- How do I verify AI-generated information against peer-reviewed or authoritative sources?
- Have I checked and reviewed the sources of the AI-generated information to ensure accuracy?
- What assumptions or biases might be embedded in the AI tools that I am using?
- How could AI-generated errors or misinformation affect the validity of my research conclusions?
- What steps can I take to identify and mitigate bias in AI-supported analysis?

Discipline-Specific Considerations

- What ethical guidelines or professional codes (e.g., ACM Code of Ethics) apply to AI use in my field?
- Are there discipline-specific risks (e.g., FERPA, IRB, human subjects) associated with my AI use?
- How does AI use in my discipline differ from or align with its use in other fields?
- Where should disciplinary expertise override AI-generated recommendations?
- Do I have the knowledge and expertise to make accurate evaluations of AI-generated information?



GENERAL GUIDING QUESTIONS FOR AI USE WHEN CONDUCTING UNDERGRADUATE RESEARCH [CONTINUED]

Data Privacy and Security

- What type of data am I sharing with AI tools, and does it include sensitive or identifiable information?
- Are the AI tools I am using institutionally approved or compliant with privacy regulations?
- Could my use of AI unintentionally expose confidential research data or violate IRB regulations?
- How can I minimize data risks while still benefiting from AI capabilities?

Skill Development and Learning Outcomes

- Which research skills should I practice independently before turning to AI?
- How can I use AI as a learning tool rather than a shortcut?
- In what ways might over-reliance on AI weaken my analytical or critical thinking abilities?
- How can AI support methodological learning rather than replace it?

Human Oversight and Responsibility

- Where is human judgment essential in interpreting AI-generated outputs?
- Who is accountable if AI-assisted work contains errors or ethical violations?
- How do I ensure that final research decisions and conclusions remain human-led?
- What checkpoints can I build into my workflow and research processes to review AI contributions?

Broader Impacts and Sustainability

- What are the environmental or societal impacts of using AI tools in research?
- How does AI use affect equity, accessibility, and inclusion in undergraduate research?
- Are there lower-impact or more ethical alternatives to the AI tools I am using?
- How can responsible AI use align with the values of my institution and discipline?



GUIDING QUESTIONS FOR STUDENTS BEFORE USING AI IN UNDERGRADUATE RESEARCH

Reflective questions to support responsible, ethical, and effective use of AI in undergraduate research.

Understanding Purpose and Limits

- Why am I using AI for this task, and what learning goal does it support?
- Which parts of this research should rely primarily on my own thinking and analysis?
- Am I using AI as a tool for support or as a substitute for my work?

Academic Integrity and Disclosure

- Have I clearly disclosed all uses of AI in my research or assignments?
- Would my instructor or research mentor consider this AI use appropriate?
- Can I explain exactly how AI contributed to my work?

Accuracy, Bias, and Verification

- How am I checking AI-generated information against peer-reviewed sources?
- What errors or biases might be present in the AI output?
- How could inaccuracies affect my conclusions or recommendations?

Discipline-Specific Awareness

- Are there ethical or professional guidelines in my field that govern AI use?
- Does my discipline place limits on AI use for data analysis, writing, or interpretation?
- Am I following expectations specific to my major or research area?

Data Privacy and Security

- Am I sharing sensitive, personal, or restricted data with AI tools?
- Are the AI tools I'm using approved by my institution?
- How could improper data handling affect research participants or institutions?

Skill Development and Learning

- What skills am I expected to develop through this project?
- How can AI help me learn rather than bypass acquiring essential research skills?
- When should I stop using AI and work independently?

Human Oversight and Responsibility

- What decisions and conclusions must I make myself rather than relying on AI?
- How do I ensure that the final interpretations reflect my understanding?
- Am I prepared to take responsibility for AI-assisted work?



GUIDING QUESTIONS FOR FACULTY BEFORE SUPERVISING STUDENT USE OF AI IN UNDERGRADUATE RESEARCH

Questions to support faculty mentors in mentoring students, policy development, and ethical oversight of AI use in undergraduate research.

Pedagogical Intent and Boundaries

- What learning outcomes might AI use in supporting roles rather than replacing essential skills?
- Where should AI use be encouraged, limited, or prohibited in undergraduate research?
- How can AI be integrated to strengthen research skill development?

Academic Integrity and Transparency

- What constitutes acceptable vs. unacceptable AI use in my discipline?
- How should students disclose AI use in proposals, manuscripts, or presentations?
- How can expectations of AI use be communicated clearly and consistently?

Accuracy, Bias, and Quality Control

- How can students be trained to critically evaluate AI-generated content?
- What safeguards can reduce bias or misinformation in AI-supported research?
- When should human interpretation/work be non-negotiable?

Discipline-Specific and Ethical Standards

- Which professional codes (e.g., ACM, ACS, APA, IRB requirements) apply to AI use?
- How does AI use differ across methodologies within my field?
- How can ethical reasoning about AI be embedded into research training?

Data Privacy, FERPA, and IRB Considerations

- What risks arise from students uploading data into public AI tools? Have I communicated clearly on these risks to student researchers?
- Which AI platforms meet institutional privacy and security requirements?
- How should AI use be addressed in IRB protocols and consent processes?

Mentorship and Skill Development

- How can faculty mentors monitor AI use without discouraging innovation?
- What scaffolding helps students learn how to use AI responsibly?
- How do faculty mentors assess student learning when AI is part of the research process?

Accountability and Oversight

- Who is responsible for errors or ethical breaches involving AI use in undergraduate research?
- How can AI use be documented for transparency and reproducibility?
- What review processes ensure responsible AI use throughout a project?

Broader Impacts and Sustainability

- What environmental, social, or equity considerations should be discussed with students?
- How can AI use promote accessibility without creating dependency?
- How does responsible AI use align with institutional values and research ethics?

References + Resources

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UNDERGRADUATE RESEARCH CHANGES LIVES. CUR HELPS MAKE IT POSSIBLE.

Undergraduate research isn't just an educational experience—it prepares students to think critically, solve complex problems, communicate effectively, and lead in an ever-changing world. CUR equips faculty, mentors, administrators, and institutions with the resources, community, and strategies to make undergraduate research a catalyst for student success and institutional excellence.

How Does CUR Lead?

- Provides a safe community of thousands of higher education faculty and mentors to connect
- Builds confident mentors who inspire the next generation
- Teaches faculty mentors and students to communicate research that shapes communities and informs decisions
- Develops timely, evidence-informed resources on emerging issues in undergraduate research
- Helps campuses create stronger, more impactful research cultures

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Volunteers



Award Recipients for
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Advocacy Letters Sent
in 2026

“While the advocacy work of CUR was a key reason I became involved, once I was engaged with CUR, I reaped many personal benefits. It is a collegial organization that has helped me network and develop friends across the country.”

-Dr. Susan Larson, Professor
Dept. of Psychology
Concordia College-Moorhead