

Report of the Ad Hoc Committee on Generative AI in Research and Education: Considerations for Responsible Use and Recommendations

Submitted March 1, 2024

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With initial input and review by members of the Ad Hoc Committee on Generative AI in Research and Education (Appendix A)

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1. Executive Summary

1.1 Overview: Activity of the Ad Hoc Committee

After receiving its charge, the Ad Hoc Committee on Generative AI in Research and Education (Committee) met regularly September 2023 – February 2024 (Appendix A). The Committee recognized that well-informed, judicious employment of generative artificial intelligence (GenAI)—and artificial intelligence (AI)—holds potential to promote equity, improve efficiency, enhance learning, expand knowledge, and prepare people to participate in civic life and geopolitics.

Like much of the GenAI-focused programming offered at Pitt during the past year (Appendix G), the Committee recognized the value of examining uses of GenAI and AI from humanistic and social science-informed perspectives, as well as the importance of considering the normative questions—the ‘whether’ and ‘if so, how’ questions—that attend use of these tools.

The Committee recognized that the range of uses of GenAI/AI, the normative landscape surrounding those uses, and the technology itself are rapidly evolving. Therefore, following submission of this report—with its Points to Consider framework, which may serve as a “living framework” for future deliberations—the Committee suggests that it (or some other body) continue to review the GenAI/AI landscape at least annually for the foreseeable future.

The Committee’s Report opens with the Committee’s **Recommendations** (§2). The first set recommends priorities for Pitt to address internally and most immediately in response to pressing needs. The second set recommends actions to position Pitt as a leader in the GenAI/AI arena.

These **Recommendations** (§2) are grounded in the Committee’s investigations, including its:

- **Benchmarking Project** to identify peer institution’s GenAI policies and practices (Appendix B),
- **Mapping Project** exploring faculty perspectives on GenAI through surveys and focus groups in eight Pitt units (Appendix C), and
- **Journal and Publisher Policies Project** examining policies regarding use of GenAI in academic publishing (Appendix D),

as well as its discussions, which identified:

- **Uses of GenAI** in three domains of higher education—teaching and learning, research, and administrative and service activities (§3) and
- **Risks and Potential Benefits** of GenAI use (§4),

which together informed its articulation of:

- **Points to Consider** in addressing concerns or developing policy regarding GenAI (§5).

The Committee urges that these **Points to Consider** be employed when implementing its **Recommendations**.

The Committee’s **Recommendations** for positioning Pitt as a leader in the GenAI/AI arena reflect three distinctive features of Pitt:

- Pitt’s strength in education and education research;
- Pitt’s strength in health sciences, the Pitt/UPMC connection, and the integrated, multi-level structure of the UPMC health system; and
- Pitt’s nature as a community-engaged University, with strength in the arts, humanities, and sciences, as well as professional schools, and a commitment to interdisciplinary collaboration to address—and to prepare students to address—“big questions.”

1.2 Recommendations: Priorities and Positioning Pitt as a GenAI/AI Leader

The Committee developed two sets of Recommendations: the first focuses internally on institutional priorities, while the second identifies ways that Pitt could position itself as a leader in GenAI/AI. In §2, the Committee articulates its rationale for each recommendation and elaborates on existing resources that could be marshalled to implement each recommendation. Further, the Committee recommends that these Recommendations be implemented while being mindful of the Points to Consider articulated in §5. (Note that the recommendations are numbered only for ease of reference, not priority of importance or timing.)

I. **Recommended Institution-facing Priorities for Pitt**

1. Select—and equitably provide—high-quality, ethical GenAI tools across the University community.
2. Develop policy regarding use of GenAI in “sensitive” contexts involving hiring and evaluation of personnel and admission and evaluation of students.
3. Foster an AI-literate campus culture by providing incentivized education regarding GenAI—including its ethical use and implications of its use—for faculty, staff, and students.
4. Integrate AI tools as appropriate to promote a student-centered educational culture.

II. **Recommendations for Positioning Pitt as a Leader in GenAI/AI**

- A. Integrate learning sciences and GenAI/AI to develop and accelerate adoption of responsible and efficacious applications of GenAI/AI to teaching and learning.
- B. Create an interdisciplinary entity to integrate—and think critically about the integration of GenAI/AI—into clinical care, public health, healthcare organization operations (including insurance), and health sciences research (including community, population, and environmental health, precision medicine, and therapeutics development).
- C. Create an interdisciplinary entity to research, and educate multiple constituencies about, the ethical, legal, economic, social, and cultural implications of the development and use of GenAI/AI.

1.3 Potential Uses of GenAI in Higher Education

- **Teaching and Learning** – Incorporating GenAI into curriculum and course design, generating assignments, generating primary and supplemental teaching materials, evaluating students, personalizing educational experiences, communicating with students, and preparing students to use GenAI in their careers
- **Research** – Searching for information, analyzing text and data, summarizing text, translating, writing, editing, peer review, public engagement regarding research, GenAI as the subject of research, development of GenAI tools
- **Administrative and service** – Using GenAI in admissions, hiring, promotion, committee work, communication, procurement, pre- and post-award administration of sponsored projects

1.4 Opportunities and Concerns

- **Opportunities** – Advancing scientific progress, improving teaching and learning outcomes, reducing faculty and staff burden, realizing efficiencies, promoting equity, providing personalized disability-related assistance, preparing students for the workforce, and promoting informed citizenship

- **Concerns** – Inaccuracy, lack of expertise in evaluating GenAI outputs and using them responsibly, bias and gaps in the corpus (training data), bias in the output, inequity (e.g., of access to GenAI and skill employing it), exacerbation of bias and discrimination, undermining of academic integrity, loss of skills, loss of unique voice, displacement of labor and expertise, unsettled IP and copyright issues, privacy and confidentiality infringements, increased faculty and staff burden, potential to overwhelm research administration infrastructure, legal and reputational risks (to the university and to GenAI users, both units and individuals), supporting exploitative training of AI tools, exacerbated marginalization of cultural and linguistic minorities and of neurodivergent students and other non-typical users, and negative environmental impact

1.5 Responsible use of GenAI: Points to Consider

The Committee reached substantial, though perhaps not unanimous, consensus that the following considerations should be taken into account when developing policy or addressing concerns regarding GenAI.

- **General considerations** – Frameworks or policies for addressing concerns should take into account the following ethical and pragmatic considerations.
 - **Academic freedom** – Faculty should have latitude in deciding whether and how to adopt GenAI tools.
 - **Consistency with academic and scientific values** – The integration of GenAI into academic and research practices should comply with values such as integrity, accuracy, creativity, and reproducibility.
 - **Risk minimization** – Adoption of GenAI and of guidance regarding it should seek to avoid harm of various kinds, such as discrimination, misinformation, physical and mental harm, and reputational harm (for example, to persons, units, and the university).
 - Given the potential for use of GenAI to have far-reaching material impact, it may be appropriate to consider development of a policy or practice modeled on policies governing [dual-use research of concern](#) that provide additional review, oversight, and monitoring of the use of GenAI (and AI more generally).
 - **Equity** – GenAI has the potential both to exacerbate and to mitigate inequities; University-sanctioned use of GenAI should seek to mitigate inequities both in access to GenAI and its benefits, and through the use of GenAI and its output.
 - **Minimization of regulatory burden** – Excessive new rule-making on the part of the University should be avoided, especially in light of existing and emerging rules and guidance regarding GenAI coming from journals, funders, and others, as well as the potential applicability to GenAI of existing University rules and policies.
 - **Adaptivity to rapid change** – Because GenAI tools and applications change rapidly, frameworks and policies should be sufficiently broad, adaptable, and/or “timestamped” for future review so as to remain relevant.
- **Context sensitivity** – Decisions regarding whether and how to employ GenAI are sensitive to context. The Committee identified the following components related to the context of potential GenAI use. Further, it is typically the interaction of these components that increases or decreases the level of concern appropriate to a particular use of GenAI, as there are trade-offs to be made between the different components: for example, as the potential material impact of an activity involving GenAI increases, so too might the level of knowledge required about the tool and subject matter.

- **Goals** – GenAI should be justified in virtue of its use serving the goal(s) of the activity; for example, writing text to think through arguments is different from writing boilerplate text, or using GenAI to supplement learning is different from using it to supplant learning. Student use of GenAI may be more appropriate, for example, in higher-level courses than in introductory courses, or vice versa.
- **Material impact**– Risks involved in the activity and the importance of the action to be taken on the basis of the activity must be considered when deciding whether and how to use GenAI. How will action based on activity including GenAI output affect well-being (e.g., individual, group, or environmental well-being)? The material impact of various activities differs; for example, learning exercises, admissions or employment decisions, and generating text on the basis of which diagnosis or medication prescription will be made have different levels of material impact in terms of their immediacy, reversibility, and importance for individual and group well-being.
- **Knowledge about the tool** – As the potential material impact of relying on GenAI and its increases, so does the warrant for understanding the GenAI tool. Information to know about the tool includes: the basics of how the tool works, how to produce and refine meaningful results, factors affecting its accuracy, tendency for bias, whether information input and the tool’s output adhere to confidentiality and privacy protections, and whether the tool adheres to IP and copyright protections.
- **Knowledge about the subject matter** – GenAI tools should be used only when the user is sufficiently proficient in the subject matter to evaluate the accuracy and relevance of the tool’s output.
- **Adequacy of relevant guardrails, safety measures, policies, and rules** – Users should ensure that they are aware of and adhere to relevant rules, policies, guidelines, and other normative guidance when employing GenAI tools. They should adjust use of GenAI in light of the adequacy of the guardrails in place, given the potential material impact of the application.
- **Domains for potential policy development** – In some domains, the University may reasonably rely on the policies of external entities (e.g., federal government granting agencies or higher education associations). In other domains, GenAI may prompt University policymaking—either by creating new policies or amending existing ones.
 - **Education**
 - **Student use of GenAI** – Students may need specific guidance regarding use of GenAI, e.g., in courses, labs, research, writing, intern/externships, and study abroad. Such guidance might be provided by adapting or revising existing policies.
 - **Research**
 - **Producing research and reviewing research** – While the University may need to develop policies regarding the use of GenAI within its own research review infrastructure, external entities—publishers and funders of research/scholarship, as well as professional societies, conferences, and journals—may have specific policies regarding use of GenAI in the conduct and review of research. In light of considerations of academic freedom, it may be more appropriate for the University to rely on and refer to these policies—as it relies on other existing policies and laws, such as the Health Insurance Portability and Accountability Act (HIPAA)—than for it to develop GenAI-focused policy itself with regard to producing research or engaging in peer review. Nevertheless, it might offer points for researchers, scholars, faculty, and staff to consider in deciding whether to use GenAI in research and research-related activities, and it might provide education regarding these considerations.

- **Development of GenAI tools** – While being mindful of the tenets of academic freedom and the importance of scientific progress, the Committee noted that the University may have an interest in providing guidance to members of the University community regarding the development of GenAI tools either as research products or for in-house uses, given risks associated with use of GenAI (e.g., reputational risks; risks to privacy, IP, or copyright; displacement of workers; marginalization of cultural or linguistic communities).
 - **Administrative and service activities**
 - **The use of GenAI in sensitive processes** – The Committee noted that hiring, employee evaluation, and student admissions may have some superficial similarities, but have substantially different goals. It also noted that GenAI in these domains could be used for very different purposes, ranging from boilerplate communications (like a chatbot to address basic inquiries from prospective students) to aspects of evaluation (e.g., summarizing text about a candidate). Policies must be sensitive to context, use, and risks (or the magnitude of the potential consequences of use). It is especially important to remember the biases that attend GenAI tools—both in their training data sets and in their output— and to recognize how use of GenAI tools may unfairly disadvantage already marginalized groups.
 - **Procurement of GenAI** – The Committee noted issues of equity in access to GenAI—both among University constituents and the broader community—as well as concerns about the practices of GenAI vendors (e.g., bias in training data; risks to privacy/confidentiality, unsettled IP and copyright issues; ownership and sharing of data “fed” into GenAI tools; use of data acquired by the vendor).
 - **Research administrative activities** – The Committee noted that some policy may be needed to address potential overload of the University’s research infrastructure, for example, from “spam” proposals.
- **Education about GenAI** – Provision of education about GenAI is important for the University to remain competitive with peer institutions and with alternate employment opportunities, as well as to pursue its values and mission as an institution. It is important to educate students about GenAI in all contexts of teaching. Faculty need to become educated about the application of GenAI in these educational contexts and in their own fields. The University should facilitate access to resources supporting educational uses of GenAI and provide faculty education, including workshops, presentations, and online instruction focused on specific teaching applications of GenAI tools. The University should provide staff education about GenAI relevant to their work and professional development.
 - The Center for Teaching and Learning already provides some [GenAI-related instructional resources](#); **Appendix E** provides additional suggestions.
- **Barriers and facilitators of GenAI adoption** – The Committee discussed the following barriers to the adoption of GenAI by faculty members and students, as well as steps that may facilitate responsible adoption.
 - **Barriers:**
 - A wide range of familiarity with GenAI, but skewing strongly toward low familiarity, as well as perceived burden of incorporating it into their courses
 - Diffuse educational programming seeking to increase familiarity with GenAI, which results in opportunities to attend multiple introductory offerings and difficulty identifying the “next step” and more advanced education (see **Appendices F and G**)
 - **Facilitators or support mechanisms:**

- Educational forums for faculty, including incentives to participate, and curriculum development grants to faculty who develop curricula or dedicated courses employing GenAI or critical thinking about GenAI and its use
- Centralization of educational efforts – The centralization and/or “rationalization” of the University’s myriad educational offerings could make more intelligible to faculty, staff, and students the progression from introductory toward more advanced offerings.

2. Recommendations: Priorities and Positioning Pitt as a Leader in GenAI/AI

2.1 Recommended Institution-facing Priorities for Pitt

Note: These are numbered only for ease of reference, not priority of importance or timing; these priorities should be pursued simultaneously.

1. **Select—and equitably provide—high-quality, ethical GenAI tools across the University community.**

Rationale:

- University-level expertise and negotiating power can be leveraged to identify high-quality products and evaluate their ethically-relevant practices e.g., privacy, data ownership.
 - Include AI responsibility criteria in choosing and contracting the tools.
- Based on ongoing assessment of units' and individuals' GenAI needs, the University can facilitate access to GenAI tools, ensuring that those with lower resources are not “left behind” at a relative/competitive disadvantage vis-à-vis higher-resourced units.

2. **Develop policy regarding use of GenAI in “sensitive” contexts involving hiring and evaluation of personnel, and admission and evaluation of students.**

Rationale:

- Particularly because of bias in the training corpus and in output of GenAI tools, these uses are considered especially sensitive, because:
 - Bias and other inaccuracies in these activities—hiring/admitting, evaluating (including grading), providing access to opportunities (e.g., promoting, recommending for employment, awards, etc.), retaining, graduating—would have substantial impact on individuals' well-being and equity among groups.
 - Reputational and perhaps legal risks to the University are associated with inappropriate reliance on GenAI tools to evaluate potential and current personnel and students.

3. **Foster an AI-literate campus culture by providing incentivized education regarding GenAI—including its ethical use and implications of its use—for faculty, staff, and students.**

Rationale:

- To remain competitive—in attracting students, personnel, and research funding—and to support interdisciplinary collaborations, the University must create and maintain a generally GenAI/AI-literate environment/community.
- University personnel, especially classroom faculty and clinical personnel, are experiencing the emergence of GenAI in the wake of demands placed on them by the Covid-19 pandemic (e.g., many teaching undergraduates “completely revised” the format of their teaching); therefore, current University members, particularly faculty and staff, are likely to require incentives to embrace GenAI education.

Elaborations:

- Educational offerings should enable participants to progress from awareness, toward proficiency (AI-literacy), and to remain current in their proficiency.

- Incentives and educational offerings could take various forms, e.g.,
 - Online and in-person offerings;
 - Faculty workshops with participation compensated by stipend or professional development funding, or provide course-releases to reward development and implementation of tools, courses, and curricula incorporating GenAI;
 - Faculty and Staff Development Certificate Program programming and certificates;
 - Microcredentials for undergraduate and graduate students;
 - Online mini-courses for faculty and staff; and
 - Support for students, faculty, and staff to participate in GenAI education nationally (where they would also serve to represent the University).
- Insofar as possible, the University should adopt an “anticipatory stance” regarding GenAI-related literacy needs (e.g., anticipate what skills students need to develop and domains of University operations in which use of GenAI will constitute best practice in order to hire or train employees).
- GenAI/AI-related education for healthcare personnel, including clinical instructors, will need to address particular technical, regulatory, ethical, and public-perception-related considerations.
- Credit courses and degree programs should afford Pitt students opportunities to develop AI-fluency and expertise in AI.

4. Integrate AI tools as appropriate to promote a student-centered educational culture.

Rationale:

- Higher education’s commitment to inclusivity and to personalized education, coupled with how the Covid-19 pandemic revealed that universities are understaffed/resourced to address students’ needs for individualized counseling—academic, career, and mental health counseling—create an opportunity to explore the use of GenAI/AI to support these university activities to create a holistically student-centered educational culture.

Elaboration:

- The University should explore tools to:
 - Enhance learning by enabling adaptation of curricular materials, for example, to individual learning preferences, language differences, students’ different backgrounds, and gaps in background;
 - Improve accessibility and inclusivity, including for students with disabilities and cognitive differences, first-generation college students, and linguistic minorities;
 - Increase engagement, improve outcomes, and provide additional career service, advising, and mentoring support; and
 - Support student well-being.

2.2. Recommendations for Positioning Pitt as a Leader in GenAI/AI

Three distinctive features of Pitt prompted articulation of these opportunities for Pitt to lead in the domain of GenAI/AI:

- Pitt’s strength in education and education research;
- Pitt’s strength in health sciences, the Pitt/UPMC connection, and the integrated, multi-level structure of the UPMC health system; and

- Pitt's nature as a community-engaged University, with strength in the arts, humanities, and sciences, as well as professional schools, and a commitment to interdisciplinary collaboration to address—and to prepare students to address—"big questions."

These recommendations are not listed in any order of priority.

A. Integrate learning sciences and GenAI/AI to develop and accelerate adoption of responsible and efficacious applications of GenAI/AI to teaching and learning.

Elaborations:

- Identify specific key areas of existing and future strength in which to stake Pitt's claim to leadership in AI-in-Education, e.g., to increase access for students with disabilities, cognitive difference, and socioeconomic barriers to learning.
- Develop research-practice partnerships as an incubator for AI-in-Education to enhance quality by grounding research and innovation in practice contexts.
- Collaborate to support efforts of regional school systems for K-12 regarding selection of GenAI tools and provision of education in GenAI/AI; scale this effort nationally.
- Consider developing (or establish academic-industry collaborations to develop) GenAI tools aligned with education- or higher-education-focused values and needs (e.g., tools with privacy features suitable for IRB-approvable research, accuracy enhancements, bias mitigation, or increased transparency regarding the training corpus).
- Ensure that these initiatives address 'should', as well as 'how' questions, i.e., explore and educate about the normative dimensions and social implications of employing GenAI/AI.
- Addressing this recommendation could involve **creating an institute or center for GenAI/AI-in-Education**—including education research, technology development, and education of future educators—**or establishing a hub or other internal entity** that brings together units and individuals already working in this domain, supports (and facilitates new) collaborations, and develops projects and mechanisms to explore opportunities and meet identified needs.
 - Examples of existing resources/collaborations: SOE, SCI, LRDC, CTL, BE STEM Center, Learning Sciences Artificial Intelligence Education Hub (SCI-LRDC-CTL collaboration), LRDC Learning Sciences Distinction for undergraduates, Open Lab @ Hillman (a ULS-CTL collaboration), Office of Innovation & Entrepreneurship, Responsible Data Science @ Pitt Advisory Board.

B. Create an interdisciplinary entity to integrate—and think critically about the integration of GenAI/AI—into clinical care, public health, healthcare organization operations (including insurance), and health sciences research (including community, population, and environmental health, precision medicine, and therapeutics development).

Elaborations:

- Pitt is widely known for pioneering work in health sciences; UPMC is the region's major employer; integrating AI into healthcare will integrate AI into the region's economy and culture.
- Clinicians and healthcare organizations need understand how to use GenAI/AI, its limitations, and how to communicate effectively with patients and public about its use and limitations, including justified concerns about bias, exacerbation of justified mistrust, and effects on health/healthcare disparities.

- This entity could participate in the afore-recommended education-focused entity/institute to pioneer clinical/health sciences education regarding patient care, healthcare organization, and clinical research uses of GenAI/AI.
- Addressing this recommendation could involve **creating a Pitt Institute or Pitt/UPMC Institute**, or a hub of centers, departments, programs, and other units.
 - Examples of existing resources/collaborations: Pittsburgh Center for AI Innovation in Medical Imaging (CAIMI), Pitt HexAI Lab, CTSI, Institute for Precision Medicine, Department of Biomedical Informatics, Department of Health Information Management, Center for Bioethics & Health Law, Office of Innovation & Entrepreneurship, BioForge, Responsible Data Science @ Pitt Advisory Board.

C. Create an interdisciplinary entity to research, and educate multiple constituencies about, the ethical, legal, economic, social, and cultural implications of the development and use of GenAI/AI.

Elaborations:

- Consider the implications of GenAI/AI as one of the “big questions” facing this generation of researchers, scholars, innovators, and educators.
 - Attend to the impact of AI on various components of the workforce, “the nature of work,” “what it means to be human,” academic values (e.g., creativity, replicability), norms of productivity, and our understanding of ‘intelligence’.
 - Use developments in AI as the impetus to consider “the future of knowledge” and “the future of the University.”
- Explore ‘should’ questions and issues of governance and authority regarding GenAI/AI.
- Use outcomes of this entity’s research to inform development of University policies, educational content, and GenAI/AI tools, as well as to establish Pitt’s expertise to inform broader/external policy.
- Employ GenAI/AI as a context or use case to develop students’/trainees’ skills of critical reasoning and normative analysis.
- This entity could participate, or serve as a resource for, both of the afore-recommended education and healthcare focused centers, but should not substitute for those entities specific, focused consideration of the ethics and implications of GenAI/AI use.
- Addressing this recommendation could involve **creating an institute or hub** that integrates existing and new initiatives and entities.
 - Examples of existing resources/collaborations: Responsible Data Science @ Pitt; Research, Ethics and Society Initiative of Pitt Research; Digital Humanities Research @ Pitt; Center for Bioethics & Health Law; Center for Philosophy of Science; Department of History and Philosophy of Science; Pitt Cyber; Center for Governance and Markets; proposed Center for Artificial Intelligence as a Human Practice at the University of Pittsburgh (proposed to NEH), and the proposed Doctoral Program in Responsible Computing Research, Policy and Practice.

3. Potential Uses of GenAI in Higher Education

Drawing on Committee discussions and the RESI Mapping Project, this section describes the range of potential uses of GenAI in educational, research, and administrative and service contexts. Though this section notes sensitive uses that the Committee generally agreed would warrant especially careful consideration, this section is primarily descriptive; normative discussion is reserved for §4.

The RESI Mapping Project found most faculty surveyed (64%) currently don't use GenAI at all for professional activities. Those who do use it primarily use it in research (21.5%) and teaching (17.4%). Few faculty reported using GenAI in service work (6.9%). The low utilization of GenAI may be partly due to a lack of familiarity with its potential uses, such as those listed below. (More detailed findings of the Mapping Project are reported in **Appendix C.**)

3.1 Uses in Education

GenAI may be useful in myriad aspects of educating and supporting students throughout their academic careers, including:

- **Curriculum and Course Design** – GenAI could be used to map curricula across a wide range of disciplines, programs, and credentials. It could be used to identify deficiencies, and suggest additions, in program goals, academic outcomes, and course sequencing. It could be used for efficient early-stage course design for both in-person and online courses, as well as for editing and reviewing final course plans.
- **Assignments** – GenAI could be incorporated into homework, in-class assignments, and student research. (See **Appendix E** for specific examples.)
- **Generating primary and supplementary teaching materials**
 - **Syllabi and lesson plans** – These can be generated in two ways: (1) generate syllabi and lesson plans from scratch by prompting the GenAI to produce these documents based on the information it has, or (2) feed some documents into the GenAI, such as articles, and use them as a basis for prompts.
 - **Slides, handouts, and lecture notes** – Instructors could use GenAI to generate teaching materials or convert between formats; for example, they could use GenAI to turn their lecture notes into slides or handouts. They could also feed primary materials into GenAI to create slides, handouts, and lecture notes.
 - **Study materials, resources and in-class activities** – GenAI could be used to generate these materials, including materials tailored for students of varying preparation and backgrounds.
 - **Summaries of long articles, recorded lectures, and other videos** – GenAI could be used, for example, to evaluate a YouTube transcript from a one-hour lecture or workshop, identify the 10 key points, and turn those points into essential questions related to the material.
 - **Instructional support** – GenAI can create clear step-by-step instructions for the use of various educational technologies or for specific assignments to clarify the instructor's intent and desired outcomes. It could be used to create assignment rubrics and then use those rubrics to evaluate submissions.
 - Intelligent coaches and simulated environments could supplement direct instruction by faculty, particularly for difficult concepts and skills.
 - **Gamification** – GenAI can create assignments and activities that apply typical elements of game playing (e.g., point scoring, competition with others, rules of play)

- to teach content and processes and to encourage student engagement with the material.
- **Question banks** – Instructors could generate new questions for exams and study guides by feeding existing questions into GenAI and asking for variations. They could also feed teaching materials into GenAI and ask for questions about them in a style that is appropriate for the class.
 - **Accessibility enhancement** – GenAI can evaluate teaching materials, activities, and online learning resources for appropriate elements of universal design (UD), which seeks to design materials to be as functional as possible for as many people as possible.
- **Personalizing Educational Experiences**
 - **Multilingual students** – GenAI could be used to customize material for multilingual English speakers.
 - **Students with varying skills** – GenAI could be used to analyze individual student decision-making and learning skills, and then suggest appropriate activities to develop those skills for each student. It could be used to provide appropriate feedback to students and customize the follow-up learning activities to address weaknesses and to provide appropriate practice opportunities.
 - **Communicating with students**
 - **Responding to student emails** – In some contexts, instructors may be able to use GenAI to accelerate responding to student emails. They might use GenAI for editing emails, for example, by writing the content of the email as a “stream of consciousness” and using GenAI to make that text into email format. Another potential use is to feed the student questions and relevant documents into GenAI, and ask for a draft of a response email.
 - **Chatbots about teaching materials** – In the corporate world, many companies are building chatbots that are fine-tuned on company documents. Employees interact with the chatbot to get the information they need more quickly. In a university setting, an equivalent use could be feeding teaching materials or administrative documents into a chatbot and allowing students to ask the chatbot questions about it.
 - **Writing letters of recommendation** – Some instructors need to write recommendation letters that are formulaic and carry low stakes. In these cases, some have used GenAI to accelerate the process by giving the GenAI information about the format and the student’s resume, cv, or other information. Instructors should distinguish contexts of recommendation letter writing that carry higher stakes, where use of GenAI may be inappropriate or at least warrants careful consideration.
 - **Evaluating students** – As discussed in §5, evaluation of individuals’ performance is a sensitive use of GenAI that warrants especially careful consideration prior to implementation, as well as careful monitoring to guard against effects of bias and inaccuracy, if it is used at all.
 - **Grading** – GenAI could be used for the evaluation of text in open-ended response situations and for some standardized tests. This use could include discussion boards, essays, and exams. Used carefully, there may be contexts in which GenAI could streamline the grading process.

- **Examinations** – Access to GenAI tools can be blocked during examinations at the discretion of instructors; Pitt IT should implement support for such examination conditions. Faculty should be able to justify why they prohibit or limit use of GenAI.

3.2 Uses in Research

Research activities include proposing research, conducting research, reporting research results (e.g., in publications or to various audiences, including to the public, in academic journals, at conferences, and in reports to funding agencies), reviewing research proposals (internally at the University or externally through peer review or by potential funders) and reviewing research reports (e.g., peer review of manuscripts). GenAI was identified as having potential use at all of these stages of the research enterprise.

- **Writing**
 - Outlining and brainstorming
 - Generating portions of research text – e.g., literature reviews, abstracts
 - Generating boilerplate portions of texts:
 - Grant proposals – e.g., sections about resources and facilities, nonhuman animal research protections, human subjects protections, conflict of interest disclosures, data management and data sharing plans
 - Research–assisting documents – e.g., consent forms and other communications with research participants, survey instruments
 - Research records – e.g., drafting routine portions of a lab book
 - Grant reports – e.g., progress reports, final reports
 - Converting research papers into other formats – e.g., extended abstracts, shorter conference papers, posters, slides
 - Polishing text – e.g., checking spelling and grammar, altering style, increasing or reducing word count
- **Analyzing text and data**
 - Summarizing research papers
 - Summarizing findings from empirical research, e.g., interviews in qualitative research
 - Generating code to conduct quantitative analysis
 - Analyzing images
 - Quantitative analysis – e.g., drawing conclusions from data, generating graphics representing data
 - Data mining – e.g., to generate hypotheses and research questions
- **Translating** – GenAI can translate texts one wants to read outside one’s linguistic capability, translate one’s own papers into another language, and translate research materials (e.g., consent forms, advertising for recruitment).
- **Review and dissemination of research results** – GenAI could be used in peer review of journal articles, book manuscripts, and proposals of conference presentations. GenAI could be utilized to summarize text and produce first drafts of responses. As discussed in §5, some publishers and journals have already implemented policies regarding use of GenAI in the review process, as well as by authors.
- **Public engagement** – GenAI can convert research papers into formats that would be more engaging for public consumption, such as blog posts, social media posts,

newsletters, websites, images, and videos.

- **Review of research proposals** – GenAI could be used in peer review of research proposals and grant applications. It could be utilized, for example, to summarize text or to identify whether required components are included. GenAI could be used by the University’s research infrastructure, for example, to ensure that applications are complete. As discussed in §5, some research sponsors have already implemented policies regarding use of GenAI.
- **GenAI as the subject of research** – Researchers may choose to study GenAI, for example, by building GenAI tools or studying the tools’ limitations.

3.3 Uses in Administrative and Service Activities

As discussed in section 4, some uses of GenAI in administrative and service activities—in particular, the evaluation of the performance of individuals—should be considered sensitive and warrant especially careful consideration prior to implementation, as well as careful monitoring to guard against effects of bias and inaccuracy, if GenAI is used at all. Other uses involve lower stakes or risk. The contexts and range of potential uses includes:

- **Student recruitment, admissions, and retention, and alumni development**
 - Generating supporting texts such as calls for applications and recommendation letters
 - Addressing prospective student inquiries (e.g., through chatbots or automated responses)
 - Reviewing materials such as applications, transcripts, writing samples, and letters of recommendation, where evaluation for completeness may not itself be a sensitive use of GenAI, while evaluation of the quality of applicant or student performance would be
 - Communicating with prospective students and admitted students
 - Communicating with students to maintain engagement and assist with advising
 - Communicating with alumni
- **Hiring, evaluation, and promotion of faculty and staff** – As discussed in §5, evaluation of individuals’ performance is a sensitive use of GenAI that warrants especially careful consideration before implementation, as well as careful monitoring, if it is used at all.
 - Generating supporting texts such as calls for applications and appointment letters
 - Preparing evaluation materials by faculty and staff, e.g., annual evaluation materials
 - Using text analysis to analyze and summarize student evaluation of teaching surveys (OMETS), which could be performed by the instructor in preparing evaluation or application materials, or by those reviewing the instructor’s performance. The latter would constitute a sensitive use of GenAI warranting especially careful consideration prior to implementation, as well as careful monitoring to guard against effects of bias and inaccuracy, if it is to be used at all.
 - Reviewing materials such as applications, annual evaluations, dossier materials, and reference letters, again a sensitive use
- **Committee work**
 - Generating and summarizing meeting notes
 - Generating text for reports, such as annual reports for leadership

- **Procurement** – e.g., review of contracts and vendor bids
- **Preaward and postaward research administrative activities** – e.g., identification of contracting terms, comparison of documents, identification of resources, development of template documents, addressing commonly asked questions, and drafting processes and procedures

4. Risks and Potential Benefits of GenAI in Higher Education

It is impossible to capture all the risks and potential benefits of GenAI. However, it is essential to reflect on them when considering whether and how to use GenAI tools. The following potential benefits and risks were identified by the Committee and focus group participants in the RESI Mapping Project. Points to consider for the responsible use of GenAI, presented in §5, take these risks and potential benefits into account.

4.1 Potential Benefits and Opportunities

- **Scientific progress** – Using GenAI well can lead to scientific breakthroughs.
- **Efficiency** – GenAI can save time and free staff and faculty for other tasks.
- **Promoting equity** – When built well, AI can decrease unintended bias in critical decisions such as hiring and admissions. In addition, AI can equalize unlevel playing fields; for example, multilingual English speakers can polish their writing and avoid others' biases stemming from their non-idiomatic language.
- **Preparing students for the workforce** – Incorporating GenAI in educational activities can help prepare students to integrate into the workforce, as employers are likely to expect graduates to be able to use GenAI in their work.
- **Promoting informed citizenship** – AI, and GenAI in particular, impact society as a whole in multiple ways, ranging from disruptions in the labor force to disinformation to myriad interventions in and interactions with geopolitical power structures (e.g., differential responses to regulation of AI by various actors). People who are informed about AI may be better prepared to participate in civic life.

4.2 Risks and Concerns

- **Inaccuracy** – Any use of GenAI as a source of information presents this risk, including brainstorming, using it as a search engine, summarizing texts, and quantitative analysis. Although GenAI is a rapidly evolving field, a [May 2023 study](#) found that 25% of the citations provided by GenAI search engines are off-point.
- **Bias and discrimination** – The outputs of GenAI have been shown to be biased. For example, it has been shown to make [gendered assumptions in texts](#) and [racial assumptions in images](#). Such assumptions can distort the outputs. For example, the GenAI-based search engine, Bard, [answered](#) medical questions with racist and debunked theories. Similarly, biased assumptions might influence the summaries of texts, outlines, and brainstorming sessions. Moreover, inequities and discrimination can result from uneven access to GenAI tools. For example, giving students assignments that require the use of GenAI may disproportionately and negatively impact students who have less access to it.
- **Plagiarism and academic dishonesty**– It is difficult or impossible to detect when students use GenAI in assignments. Instructors might be tempted to use tools that claim to detect AI-generated text. However, these tools have been shown to be inaccurate. Moreover, a [recent study](#) found that detectors of generated text are biased against “non–

native English writers.” Faculty—and other writers and researchers—could also use GenAI in violation of applicable policies, contrary to best practices or norms of their fields, or without appropriate disclosure.

- **Loss of skills or failure to develop skills** – If instructors allow students to rely on GenAI to produce particular outputs, students may become less proficient at particular skills. For example, students who are not confident of their English language skills may overly rely on GenAI to polish their writing instead of gradually improving their English language skills. Students who use GenAI to summarize texts may not learn the content or may not learn how to identify the most important content or to make connections between ideas. Those who rely on GenAI to perform quantitative analysis may either fail to learn, or may forget, how to perform those functions or the rationale for them.
- **Loss of unique voice** – When using GenAI to polish text, it is possible that the text will lose the unique voice of the author. In addition, when using GenAI for brainstorming and outlining, the output may end up mimicking common patterns at the expense of the unique perspective of the user.
- **Displacement** – Widespread use of GenAI in the University could have a negative impact on the people currently doing that work who could be replaced.
- **IP and copyright** – Using GenAI to create teaching and research materials presents as yet unsettled IP and copyright issues.
- **Support of potentially exploitative training** – GenAI tools are trained on a corpus, for which the corpus originators are typically not compensated.
- **Privacy and confidentiality** – Information inputted into GenAI may be exposed. This can be especially problematic when the information is private, confidential, or personal with an expectation of limited dissemination. Commercial entities may share the information obtained through such inputting, thereby more widely disseminating it and increasing the risk that even deidentified information could be reidentified.
- **Faculty burden** – Incorporating GenAI into assignments and curricula may overburden faculty; effort expended to address the need to learn about and/or incorporate GenAI impinges on time and intellectual energy available for research and for other teaching activities.
- **Disruptions of research enterprise** – In both foreseeable and as yet unforeseen ways, GenAI may disrupt the research enterprise, for example overwhelming research review processes with “spam” proposals or manuscripts, or because it is difficult to estimate the resources needed to employ GenAI/AI in research, which may lead to underestimates of costs in submitted budgets. The University may need to develop policies to address burdens of “spam” proposals, and to consider how to budget for such un/underestimated costs and to allocate such budgeted reserves fairly.
- **Exacerbated marginalization** – The outputs of GenAI reflect the data or corpus on which they are trained. The data typically overrepresent certain cultural groups, such as Western authors and artists. Reliance on these outputs may exacerbate this

overrepresentation and may result in the increased marginalization of underrepresented groups with negative material impact on them.

- **Environmental impact** – A recent [paper](#) paints a picture of the potential environmental impact of AI. The computing power required for GenAI could make data centers' energy consumption and carbon footprint balloon. While it is still too early to calculate how much planet-heating pollution might be associated with GenAI, it is important to consider and devise ways to minimize and otherwise address potential runaway emissions.
- **Legal and reputational risks to the University** – Use of AI or GenAI in various University activities may expose the University to legal liability or reputational risks, for example, if GenAI-generated communications are not reviewed by a person with expertise and are inaccurate or otherwise embarrassing to the University, if GenAI is used in hiring or admissions and exacerbates biases, or if GenAI is used to replace human workers.
- **Risks associated with ignoring or minimizing use of AI or GenAI** – The University may need to consider its stance vis-à-vis the use of, access to, and education about AI and GenAI, in order to remain competitive not only with peer institutions, but also with private companies or more entrepreneurial universities that could offer national programming.

5. Responsible Use of GenAI: Points to Consider

The Committee reached substantial, though perhaps not uniform, consensus that the following considerations should be taken into account when developing policy or addressing concerns regarding GenAI. The Committee noted that these considerations are not uniquely applicable to GenAI, but apply to the adoption of other tools and technologies. They may, however, be especially relevant to GenAI because of the nature of the technology and the variation in levels of understanding of it.

5.1 General Considerations

Frameworks or policies for addressing concerns should take into account the following ethical and pragmatic considerations.

- **Academic freedom** – Faculty should have latitude in deciding whether and how to adopt GenAI tools.
- **Consistency with academic and scientific values** – The integration of GenAI into academic and research practices should comply with values such as integrity, accuracy, creativity, and reproducibility.
- **Risk minimization** – Adoption of GenAI and of guidance regarding it should seek to avoid harm of various kinds, such as discrimination, misinformation, physical and mental harm, and reputational harm (for example, to persons, units, and the university).
 - Given the potential for use of GenAI to have far-reaching material impact, it may be appropriate to consider development of a policy or practice modeled on policies governing [dual-use research of concern](#) that provide additional review, oversight, and monitoring of the use of GenAI (and AI more generally).
 - Practices such as “red teaming” and ethics and risk mitigation review may be warranted for some applications of GenAI.
- **Equity** – GenAI has the potential both to exacerbate and to mitigate inequities; University-sanctioned use of GenAI should seek to mitigate inequities both in access to GenAI and its benefits, and through the use of GenAI and its output.
- **Minimization of regulatory burden** – Excessive new rule-making on the part of the University should be avoided, especially in light of existing and emerging rules and guidance regarding GenAI coming from journals, funders, and others, as well as the potential applicability to GenAI of existing University rules and policies.
- **Adaptivity to rapid change** – Because GenAI tools and applications change rapidly, frameworks and policies should be sufficiently broad, adaptable, and/or “timestamped” for future review so as to remain relevant.

5.2 Context Sensitivity

Decisions regarding whether and how to employ GenAI are sensitive to context. The Committee identified the following components related to the context of potential GenAI use. Further, it is typically the interaction of these components that increases or decreases the level of concern appropriate to a particular use of GenAI, as there are trade-offs to be made between the

different components: for example, as the potential material impact of an activity involving GenAI increases, so too might the level of knowledge required about the tool and subject matter. Were a GenAI application to be employed with minimal human oversight prior to its output having material effect, the stakes involved should be low (e.g., employing a chatbot to answer a basic inquiry may garner little concern, while evaluating an employment application and rejecting an applicant should be considered a sensitive use and should be subject to rigorous scrutiny, if such “autonomous” AI is to be used in that context at all).

- **Goals – Use GenAI only when it serves the goal of the activity** – Use of GenAI should be justified in virtue of its use serving the goal(s) of the activity.
 - For example, whether one should use AI to generate text depends on the goal of writing that text. One kind of goal for writing is to express oneself or work through a reasoning process. This could be the case when writing some papers, for example. In these cases, using GenAI to brainstorm or even polish text might be counter-productive. However, another kind of goal is to perform a routine and time-consuming activity. This could be the case when needing to write boilerplate portions of grant proposals, for example. In these cases, using GenAI to generate the text may be a helpful timesaver.
 - In educational contexts, decisions about whether and how to incorporate GenAI in courses may depend on the pedagogical goals of the course. Faculty should explicitly consider what they are trying to teach their students and whether having students use GenAI would inhibit or enhance that.
 - Moreover, each step of the use of GenAI should be justified.
- **Material impact** – Risks involved in the activity and the importance of the action to be taken on the basis of the activity must be considered when deciding whether and how to use GenAI. How will action based on activity including GenAI output affect well-being (e.g., individual, group, or environmental well-being)? The material impact of various activities differs; for example, learning exercises, admissions or employment decisions, and generating text on the basis of which diagnosis or medication prescription will be made have different levels of material impact in terms of their immediacy, reversibility, and importance for individual and group well-being.
- **Knowledge about the tool** – As the potential material impact of relying on GenAI and its output increases, so does the warrant for understanding the GenAI tool. Information to know about the tool includes:
 - **How the tool works** – At least in broad strokes, one needs to understand how the tool works, e.g., is the tool connected to the internet? What kind of information does it have access to?
 - **Its limitations** – One must understand the tool’s limitations, for example regarding accuracy and bias, and must know how to produce and refine meaningful results.
 - **Whether use may infringe IP rights or copyright protections, privacy, or confidentiality** – One needs to know, for example, who will have access to the information the user inputs and what may be done with that information.
- **Knowledge about the subject matter** – As the potential material impact of relying on GenAI and its increases, so does the need to be able to evaluate its outputs.
 - Due to this consideration, in some contexts, novices should not be allowed to use GenAI in the same way as advanced individuals (e.g., first-year students vs seniors, undergraduates vs faculty).

- Example 1: When using AI to summarize a text about a topic with which one is unfamiliar, one might not be able to identify even gross inaccuracies.
- Example 2: Suppose one uses GenAI to produce a first draft of a syllabus. It is important to proactively seek out discriminatory omissions, such as ignoring key texts written by minorities. If one isn't sufficiently knowledgeable to identify and remediate the unintended bias, the use of GenAI risks perpetuating and exacerbating it.
- **Adequacy and knowledge of relevant guardrails, safety measures, policies, and rules** – Users should ensure that they are aware of the relevant rules, policies, guidelines, and other normative guidance prior to employing GenAI tools. They should adjust use of GenAI to the adequacy of the guardrails in place, given the potential material impact of the application.
 - If there is inadequate guidance, potential users should carefully consider whether to employ GenAI. They might, for example, consult with colleagues who have no conflict of interest.
 - One important guardrail in GenAI use can human oversight.
 - Is the user able to review the output to identify and fix inaccuracies, biases, and other problems?
 - When the output of GenAI is to be used without or with only minimal human review, plans for its use warrant rigorous scrutiny.
 - Those with the expertise and authority to establish rules, policies, guidelines, and best practices should consider establishing these safety measures or adapting existing policies and guidelines.
 - These may be implemented at different levels, e.g., the user, particular use, type of use, department (or other unit), or institution.

5.3 Policies about GenAI: Domains and Considerations

In some domains, the University may reasonably rely on the policies of external entities (e.g., federal government granting agencies or higher education associations). In other domains, GenAI may prompt University policymaking—either by creating new policies or amending existing ones.

- **Education**
 - **Student use of GenAI** – Students may need specific guidance regarding use of GenAI, e.g., in courses, labs, research, writing, student research, internships and externships, study abroad. In many cases, such guidance might be provided by adapting or revising existing policies.
 - The use of GenAI during Internships, externships, experiential learning outside the University, and study abroad experiences may require students to be familiar with and adhere to policies regarding GenAI of companies and other entities, including geopolitical entities.
 - Faculty should be able to justify prohibiting, limiting, permitting, or requiring use of GenAI in educational contexts.
- **Research**
 - **Producing research and reviewing research** – While the University may need to develop policies regarding the use of GenAI within its own research review infrastructure, external entities—publishers and funders of research/scholarship, as well as professional societies, conferences, and journals—may have specific policies regarding use of GenAI in the conduct and review of research. In light of

- considerations of academic freedom, it may be more appropriate for the University to rely on and refer to these policies—as it relies on other existing policies and laws, such as the Health Insurance Portability and Accountability Act (HIPAA)—than for it to develop GenAI-focused policy itself with regard to producing research or engaging in peer review. Nevertheless, it might offer points for researchers, scholars, faculty, and staff to consider in deciding whether to use GenAI in research and research-related activities, and it might provide education regarding these considerations.
- **Development of GenAI tools** – While being mindful of the tenets of academic freedom and the importance of scientific progress, the Committee noted that the University may have an interest in providing guidance to members of the University community regarding the development of GenAI tools either as research products or for in-house uses, given risks associated with use of GenAI (e.g., reputational risks; risks to privacy, IP, or copyright; displacement of workers; marginalization of cultural or linguistic communities).
 - **Analogy for policy development** - Given the potential for use of GenAI to have far-reaching material impact, it may be appropriate to consider a policy modeled on policies governing [dual-use research of concern](#) that provide additional review, oversight, and monitoring of the use of GenAI (and AI more generally) in research.
- **Administrative and service activities**
 - **The use of GenAI in sensitive processes** – The Committee noted that hiring, employee evaluation, and student admissions may have some superficial similarities, but have substantially different goals. It also noted that GenAI in these domains could be used for very different purposes, ranging from boilerplate communications (like a chatbot to address basic inquiries from prospective students) to aspects of evaluation (e.g., summarizing text about a candidate). Users and policies regarding use must be sensitive to context, use, and risks (or the magnitude of the potential consequences of use).
 - It is especially important to remember that GenAI tools may carry some of the biases of their training and data sets that may unfairly disadvantage already marginalized groups. Application of GenAI in these sensitive areas must carefully monitor for this concern.
 - Using text analysis to analyze and summarize student evaluation of teaching surveys (OMETS), for example, may impair readers' ability to note qualitative evidence of bias in student reactions. This is a content in which users must be particularly vigilant regarding the risk of bias or of hidden algorithmic choices impacting the fullness of information gathering and judgement required by law and policy.
 - Reviewing materials such as applications, annual evaluations, dossier materials, and reference letters, are again a sensitive use requiring careful consideration prior to the use GenAI, as well as careful monitoring to guard against effects of bias and inaccuracy, given that qualitative bias-detection could be lost through the GenAI summation.
 - **Procurement of GenAI** – The Committee noted issues of equity in access to GenAI—both among University constituents and the broader community—as well as concerns about the practices of GenAI vendors (e.g., bias in training data, use of data acquired by the vendor, ownership and sharing of data “fed” into GenAI tools, and risks to privacy and confidentiality).
 - The Committee also noted the importance of the University investing in GenAI tools with ethically appropriate qualities and safeguards for the Pitt community to

- use, rather than leaving it to individuals and units, that may lack relevant expertise, to evaluate and procure the tools themselves.
 - **Research administrative activities** – The Committee noted that some policy may be needed to address potential overload of the University’s research infrastructure, for example, from “spam” proposals.
- **Considerations to address in policies**
 - **Permissibility** – When is using GenAI permissible?
 - **Transparency** – Whether and how should the use of GenAI be disclosed and/or explained, e.g., if authors of papers use GenAI, what should they say about it in the paper itself? If a hiring committee uses GenAI to evaluate candidates, what should it disclose? If an instructor uses GenAI within the grading process for a course, or in other aspects of student evaluation, what should be communicated to students in advance?
 - **How to ensure compliance with academic and scientific values** such as accuracy (e.g., fact-checking requirements) and reproducibility (e.g., transparency requirements)
 - **How to mitigate relevant risks** – Specifying within policies the best practices to mitigate risks may facilitate users undertaking those risk mitigation measures.
- **Writing new policies vs adjusting existing ones** – When considering policies about GenAI, it is important to discern when new policies are needed and when it is better to adjust existing policies.
 - New policies are appropriate when the concerns are novel. For example:
 - New challenges due to scale – e.g., overwhelming journals due to increased volume of submissions for peer review, or overwhelming the University’s research review infrastructure.
 - Innovative uses of the technology – e.g., GenAI in the creative arts
 - Adjusting existing policies is appropriate when GenAI raises new versions of familiar challenges. For example:
 - Students have unequal access to GenAI tools. The University might want to buy and distribute licenses. In doing so, it can use existing policies on distributing software licenses.

5.4 Educating Students, Faculty, and Staff about GenAI

It is important that students, faculty, and staff become educated about GenAI, including its potential uses, requirements for its responsible use, and its limitations. Provision of education about GenAI is important for the University to remain competitive with peer institutions and with alternate employment opportunities, as well as to pursue its values and mission as an institution.

Educating students about GenAI should become a part of the undergraduate and graduate curricula of the University. Departments and programs need to develop instruction to provide students with the knowledge and skills to use GenAI in their academic and professional careers. Consideration should be paid to integrating education about GenAI into all educational contexts, including courses, lab work, and research. The following have been identified as helpful:

- Syllabi statements about the pros and cons of using GenAI
- Class discussion/conversations about pros, cons, and responsible use of GenAI
- Faculty members who demonstrate to their students how they use or why they don’t use GenAI

- Assignments that facilitate critical thinking about GenAI output
- Course content such as lectures or units about GenAI in the context of the course material

Faculty need to become educated about the application of GenAI in these educational contexts and in their own fields. The University might incentivize faculty to learn about GenAI and incorporate it into their research/scholarship and instructional activities. The University should facilitate access to resources supporting educational uses of GenAI and provide faculty education, including workshops, presentations, and online instruction focused on specific teaching applications of GenAI tools; many that have already been provided are listed in **Appendix G**. The Center for Teaching and Learning already provides some [GenAI-related instructional resources](#); **Appendix E** provides additional suggestions.

The University should provide staff education about GenAI relevant to their work and professional development. Its provision of internal education about GenAI for faculty and staff will be necessary for the University to remain competitive both in its activities and in recruiting and retaining faculty and staff. The education to be provided to faculty and staff is likely to be, at least partly, specific to discipline, context, and/or work role. The experience of industry (private companies) may provide models for implementing such internal education.

5.5 Expanding Resource Repositories

It is beneficial for the University to facilitate development of and access to resources regarding GenAI. In addition to the [Center for Teaching and Learning's GenAI resources](#), the Committee identified these types of resources as likely to be especially helpful in educational contexts:

- **Policies and statements regarding student use of GenAI**, especially those addressing academic integrity and pros and cons of using the tools.
- **Assignments incorporating GenAI** – In addition to those of the Center for Teaching and Learning, examples are provided in **Appendix E**. Key themes in these assignments are:
 - Analyzing AI-generated output
 - Revising AI-generated first drafts
 - Using GenAI as an interlocutor
 - Using GenAI to generate practice questions
- **Assignments that make cheating using GenAI difficult** – Examples are provided in **Appendix E**. Key types of assignments and themes are:
 - Oral assignments
 - Annotation assignments
 - Mindmap assignments
 - Ways to limit access to GenAI while students are completing assignments
- **Educational materials about GenAI, its uses and limitations, and its ethical and social implications**

Resources to guide use of GenAI to develop GenAI-related best practices in research are thus far more limited than in the domain of education. To begin to address this lacuna, the RESI is developing a repository of [resources addressing ethical and social implications of GenAI](#). **Appendix E** reports on the policies and practices of journals and publishers, and research sponsors continue to issue policies regarding use of GenAI and disclosure of its use.

5.6 Barriers and Facilitators of GenAI Adoption by Faculty and Students

The Committee discussed the following barriers or challenges to the adoption of GenAI by faculty members and students, as well as steps that may facilitate responsible adoption.

- **Barriers**
 - **Low familiarity with GenAI** – The RESI Mappint Project indicates that most faculty (64%) do not use GenAI for professional activities at all (see additional findings in **Appendix C**).
 - **Variability of familiarity with GenAI** – Focus groups with faculty reveal varying levels of familiarity and comfort with GenAI (see **Appendix C**).
 - **Uncertainty about the acceptability of GenAI use** – Students may be uncertain about the acceptability of, and parameters for, using GenAI in various contexts, such as courses, labs, and research.
 - **Burden to faculty** of learning about GenAI and incorporating it into their courses—for example, revising syllabi and creating new assignments can be labor-intensive; however, failure to adapt to the new landscape also carries the risk of creating even greater future burdens.
 - **Diffuse educational offerings** that lack meaningful progression (from introductory toward more advanced offerings) and that are potentially repetitive or redundant (see **Appendices F and G**)
 - **Access challenges and burdens** – These include financial costs and informational burdens of identifying, evaluating, accessing, and employing GenAI tools.

- **Facilitators or support mechanisms**
 - **Workshops and education for faculty**
 - Incentivized opportunities for faculty to learn about GenAI tools, including their uses and limitations, may enable faculty to create materials to share with other faculty and equip them to serve as “ambassadors” in their departments.
 - The Center for Teaching and Learning, for example, has been providing workshops about various topics related to GenAI, and the RESI has offered short courses.
 - **Grants to faculty for developing curricula**
 - Pros – Grants create incentive and compensation for creating materials
 - Cons – Grants present risks of: (i) creating competition instead of collaboration, (ii) favoring people from already involved or more influential departments at the expense of others, (iii) requiring substantial time before the efforts come to fruition
 - **Centralization of educational efforts** – The centralization and/or “rationalization” of the University’s myriad educational offerings could make more intelligible to faculty, staff, and students the progression from introductory toward more advanced offerings.
 - **Dedicated courses** —both in general and in specific fields —to teach students about GenAI tools, their uses and limitations, and their social implications
 - **Student research or capstone projects** that address University needs with the outputs shared with the University community
 - **Faculty Access** – University purchasing, Pitt IT, deans, and other offices that handle faculty access to everyday GenAI tools such as ChatGPT and CoPilot should be

charged with actively assuring that access is readily available so that faculty have opportunities to become familiar with relevant tools that their students may already use.

The Committee appreciates the opportunity to provide this Report. Its co-chairs and members would be pleased to discuss its findings, deliberations, and recommendations.

Appendix A: Charge to and Members of the Ad Hoc Committee on Generative AI in Research and Education

The Committee's Charge (issued June 29, 2023):

The **Ad Hoc Committee on Generative AI in Research and Education** (hereafter 'Committee') was constituted and charged by former Provost Cudd, Interim Provost McCarthy, and SVC Rutenbar to:

- Articulate a “positive but careful approach” to Generative AI (GenAI) ;
- Identify topics where guidance is needed regarding GenAI applications in research, teaching, and learning;
- Conduct benchmarking with peer institutions regarding policies or guidance on GenAI uses, particularly research uses as Pitt's [Center for Teaching and Learning \(CTL\)](#) has already gathered so much on educational uses;
- Map the landscape for uses of GenAI at Pitt (including research and instructional uses);
- Crowdsource and gather together GenAI resources, initiatives, activities (e.g., short courses), and programming at Pitt; and
- Identify key areas in which Pitt can position itself as a leader in the GenAI arena.

Committee Membership:

Members of the Committee were drawn from twelve schools. Most of the 29 members are faculty; two are in the Provost's office and six in the Chancellor's office; and one undergraduate and two graduate students were included. Members' backgrounds include disciplines in the humanities, sciences, health sciences, and social sciences.

Co-chairs:

Lisa S. Parker, PhD

Dickie, McCamey & Chilcote Professor of Bioethics

Director, Center for Bioethics & Health Law

Director, Research, Ethics and Society Initiative of Pitt Research

John G. Radzilowicz, EdD

Interim Director, Teaching Support

University Center for Teaching and Learning

Members:

Keith Caldwell, EdD

Executive Director of Place Based Initiatives

Office of Engagement & Community Affairs

Michael Colaresi, PhD

Associate Vice Provost for Data Science and

William S. Dietrich II Professor of Political Science

Robert K. Cunningham, PhD

Vice Chancellor for Research Infrastructure

Ravit Dotan, PhD
Data Technology Ethics Consultant
Former Director of The Collaborative AI Responsibility Lab, Center for Governance and Markets

April Dukes, PhD
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Na-Rae Han, PhD
Teaching Professor of Linguistics
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Mike Holland, PhD
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Jennifer Iriti, PhD
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Michael Madison, JD
Professor of Law
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Undergraduate in the Frederick Honors College

Clyde Wilson Pickett, EdD
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Lara Putnam, PhD
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Matthew Roberts, MEd
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Jennifer Seng, JD
Assistant Vice Chancellor and Deputy Chief Legal Officer, Office of University Counsel

John Stoner, PhD
Teaching Professor of History

John Wallace, PhD
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David E. Epperson Chair and Professor, School of Social Work

David Wert, PhD, PT
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Joseph Yun, PhD
Research Professor of Electrical and Computer Engineering

Staff:

Mia Spinelli, BA
Research, Ethics and Society Initiative of Pitt Research

Appendix B: Benchmarking Project

Benchmarking Subcommittee Members:

Robert K. Cunningham, PhD
Vice Chancellor for Research Infrastructure

Mike Holland, PhD
Vice Chancellor for Science Policy and Research Strategies

Below are the policies identified at these peer institutions:

- Carnegie Mellon
- Harvard
- University of Florida
- University of Illinois
- Indiana University
- University of Michigan
- Michigan State University
- MIT
- University of North Carolina–Chapel Hill
- Stanford

Policies will be evolving; these were collected September–November 2023.

A comparison of Pitt to these peers is in process. General observations thus far include:

- Centers for teaching and learning are the most frequent locations for attention to GenAI, and these tend to provide resources for instructors.
- Academic Integrity and Student Honor Codes generally do not address GenAI.
- GenAI is generally not addressed in research–related policies.

Carnegie Mellon

Policies:

- Provost’s Office (Policy Refers to Computing Services, “Generative Artificial Intelligence Guidelines” <https://www.cmu.edu/computing/start/ai-guidelines.html>)
<https://www.cmu.edu/leadership/the-provost/campus-comms/2023/2023-08-29.html>

Resources:

- Teaching & Learning – Refer to FAQ link about Generative AI tools
<https://www.cmu.edu/teaching/technology/aitools/index.html>
- Webinar
<https://insights.sei.cmu.edu/news/live-qa-webinar-to-discuss-risks-and-opportunities-of-generative-ai/>
- Heinz College offered class: *Societal Consequences of Tech Changes: Generative AI & Societal Implications* (Syllabus linked online)
<https://www.heinz.cmu.edu/current-students/courses/94-816/>

GenAI not mentioned in:

- General information on Univ. Policy, Academic Integrity
<https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html>

- General website for Office of Research Integrity and Compliance
<https://www.cmu.edu/research-compliance/responsible-conduct/index.html>
- Student Conduct Resources
<https://www.cmu.edu/student-affairs/ocsi/students/index.html>

University of Florida

Resources:

- Teaching & Learning – Chatbots and Artificial Intelligence in Education
<https://teach.ufl.edu/resource-library/chatbots-and-artificial-intelligence-in-education/>

GenAI not mentioned in:

- University Policy on Academic Freedom
<https://policy.ufl.edu/regulation/7-018/>
- University Student Honor Code and Student Conduct Code
<https://policy.ufl.edu/regulation/4-04/>
- UF Research Integrity Policy
<https://policy.ufl.edu/policy/research-integrity/>
- University Library User Policies
<https://uflib.ufl.edu/about/user-policies/>

Harvard

Policies:

- School of Education policy on student use of GenAI
https://docs.google.com/document/d/1S_N8UH21PiQMmNFMXLeJZNSZMTDifjz0P8oQeXyIQOk/edit

Resources:

- School of Education Teaching & Learning Lab
https://docs.google.com/document/d/1ju1ThN5KvQXyDuwmhbJFsvz7H6m1hKWwPz_OGgCmakQ/edit#heading=h.j2bzkicunlm
- <https://docs.google.com/document/d/1NGJZEj2aDWCFDBgyTnv7AfeQf2N0RGWw0Nu-nOxb3yw/edit>
- An educator's introduction to GenAI
- <https://bokcenter.harvard.edu/artificial-intelligence>
- Guidance on using GenAI in assignments
https://docs.google.com/document/d/1An4YYP_QMOTfpjLy9mgHaz2qMmFjEbEls7a9PtAbJiU/edit
- https://writingproject.fas.harvard.edu/sites/hwpi.harvard.edu/files/hwp/files/a_framework_for_designing_assignments_in_the_age_of_ai.pdf?m=1691774715
- Resources for faculty members on GenAI
<https://oue.fas.harvard.edu/ai-guidance>
- Rubric for syllabus statements about GenAI
<https://docs.google.com/document/d/1-9CqPH4Hs-EIDJzo85tVtzmHivM2qO74w0-KuIJVb6E/edit#heading=h.t9oddx850roy>

GenAI mentioned:

- Library Strategic Plan
<https://library.harvard.edu/advancing-open-knowledge>

GenAI not mentioned in:

- Student Handbook
https://handbook.college.harvard.edu/sites/projects.iq.harvard.edu/files/collegehandbook/files/harvard_college_student_handbook_2023-2024.pdf
- Statements on research integrity
<https://research.harvard.edu/2021/02/17/research-integrity/>
- <https://research.fas.harvard.edu/research-integrity>
- Information on proposal writing:
<https://osp.finance.harvard.edu/common-proposal-elements>
- Governing principles of research
- https://docs.google.com/document/d/1ju1ThN5KvQXyDuwmhbJFsvz7H6m1hKWwPz_OGgCmakQ/edit#heading=h.j2bzkclunlm
- Checklist for submitting proposals
https://osp.finance.harvard.edu/files/office-for-sponsored-programs/files/new_and_competing_proposal_review_checklist.xlsx?m=1642513822
- Policies on authorship and acknowledgment
<https://research.fas.harvard.edu/links/guidelines-authorship-and-acknowledgement>
- Guidelines on IP
<https://otd.harvard.edu/faculty-inventors/resources/policies-and-procedures/statement-of-policy-in-regard-to-intellectual-property/>

University of Illinois

Resources:

- Faculty Series Resource: Generative AI implications for Teaching & Learning
<https://citl.illinois.edu/citl-101/instructional-spaces-technologies/teaching-with-technology/generative-artificial-intelligence/teaching-learning-implications-of-GenAI>
- Article: ChatGPT: Perspectives and Strategies for Prohibiting, Reducing, or Embracing it in Your Curriculum
<https://teaching.uic.edu/news-stories/chatgpt-perspectives-and-strategies-for-prohibiting-reducing-or-embracing-it-in-your-curriculum/>
- Digital Risk Management: Generative AI Guidance for Instructors
https://www.vpaa.uillinois.edu/digital_risk_management/generative_ai/instructors/
- Gies School of Business: Generative AI Guiding Principles
<https://answers.uillinois.edu/gies/128405>
- Technology Services Article: Next in Tech: ChatGPT in the Classroom
<https://techservices.illinois.edu/2023/03/22/next-in-tech-chatgpt-in-the-classroom/>

GenAI not mentioned in:

- University Student Code
<https://studentcode.illinois.edu/>
- General information on Univ. Policy, Academic Integrity
<https://studentcode.illinois.edu/article1/part4/1-402/>

- Information on computer use policies
<https://techservices.illinois.edu/information-technology-policies/>
- Research integrity & ethical conduct
<https://research.illinois.edu/compliance-safety/research-integrity-ethics-and-misconduct>
- General statement on Univ. Policy on Integrity in Research and Scholarship
https://research.illinois.edu/sites/default/files/general_principles_of_the_ethical_conduct_of_research_and_scholarship_final_0.pdf
- General statement on Univ. Policy on Integrity in Research and Publication
[https://www.vpaa.uillinois.edu/userfiles/Servers/Server_420372/file/Integrity-in-Research-Publication-policy%20\(3\).pdf](https://www.vpaa.uillinois.edu/userfiles/Servers/Server_420372/file/Integrity-in-Research-Publication-policy%20(3).pdf)

Indiana University

Resources:

- Teaching & Learning – Statement on how educators can address use of AI-generated text in the classroom
<https://citl.indiana.edu/teaching-resources/academic-integrity/AI-Generated%20Text.html>
- Syllabi policies for AI generative tools
https://docs.google.com/document/d/1RMVwzjc1o0Mi8Blw_-_JUTcXv02b2WRH86vw7mi16W3U/edit?pli=1#heading=h.1cykjin2vg2wx
- Example of statement which an educator could distribute to students
<https://drive.google.com/file/d/167uCCB7suSPij1AgEanTdRqyWq-GLcYt/view?pli=1>

GenAI mentioned:

- IT Services statement on the risks of generative AI tools
- https://kb.iu.edu/d/bigz?_gl=1*2285qn*_ga*MTI0OTA0OTI4My4xNjk4OTU0NTMw*_ga_61CH0D2DQW*MTY5OTAxODQ0NS4yLjEuMTY5OTAxOTE2Ni4xMy4wLjA.&_ga=2.266005903.162325599.1698954530-1249049283.1698954530#classes

GenAI not mentioned in:

- Student Code
<https://studentcode.iu.edu/responsibilities/academic-misconduct.html>
- Research Policies
<https://research.iu.edu/policies/index.html>

University of Michigan

Resources:

- Generative AI instructional resources for Faculty
<https://academictechnology.umich.edu/instructional-resources/generative-ai>
- CRLT (Center for Research on Learning & Teaching) Blog: ChatGPT: Implications for Teaching and Student Learning
<https://crlt.umich.edu/blog/chatgpt-implications-teaching-and-student-learning>
- Generative AI Guidance for Faculty: Course Policies & Syllabi Statements
<https://GenAI.umich.edu/guidance/faculty/course-policies>
- Generative AI guidance for students
<https://GenAI.umich.edu/guidance/students>

- Information and Technology Services: Generative AI Guidance
<https://GenAI.umich.edu/>

GenAI not mentioned in:

- General statement for Students re: Academic Misconduct & Resources for Instructors (Generative AI not mentioned)
<https://lsa.umich.edu/lsa/academics/academic-integrity.html>
- Honor Codes and Academic Integrity policies directory
<https://crlt.umich.edu/faculty/honor#Educ>
- General statement on Introduction to Academic Integrity
<https://guides.lib.umich.edu/academicintegrity>

Michigan State University

Policies:

- Interim Guidance on Data Uses and Risks of Generative AI
<https://tech.msu.edu/about/guidelines-policies/generative-ai/>
- Generative Artificial Intelligence (AI) Reminders and Guidance for Students
<https://provost.msu.edu/news-and-updates/2023-student-AI-20230926>
- Interim Guidance on Generative Artificial Intelligence (AI) in Instructional Settings
<https://teachingcenter.msu.edu/resources/GenAI>

Resources:

- Article for faculty members – Generative Artificial Intelligence Guidance
<https://provost.msu.edu/news-and-updates/2023-generative-AI>
- Incorporate Generative AI in Your Syllabus (includes syllabus language examples)
https://iteach.msu.edu/iteachmsu/groups/ai-education/stories/2766/challenge_id/391/level_id/1
- Develop and actively communicate your course-level generative AI policy
https://iteach.msu.edu/iteachmsu/groups/ai-education/stories/2761/challenge_id/388/level_id/1
- Promote Equitable and Inclusive Use (of Generative AI)
https://iteach.msu.edu/iteachmsu/groups/ai-education/stories/2762/challenge_id/388/level_id/1
- Determine Ethical and Scholarly Use (of Generative AI)
https://iteach.msu.edu/iteachmsu/groups/ai-education/stories/2763/challenge_id/388/level_id/1
- AI as a complex issue requiring multiple perspectives and dialogue
https://iteach.msu.edu/iteachmsu/groups/ai-education/stories/2764/challenge_id/388/level_id/1

GenAI mentioned:

- MSU's Enhanced Digital Learning Initiative – Generative AI Use Codes
<https://edli.msu.edu/2023/08/26/generative-ai-use-codes/>

GenAI not mentioned in:

- Ombudsperson academic integrity resources/policies
<https://ombud.msu.edu/resources-self-help/academic-integrity>

- Michigan State University Guidelines on Authorship
<https://rio.msu.edu/authorship>
- Procedures Concerning Allegations of Misconduct in Research and Creative Activities
https://rio.msu.edu/sites/rio.msu.edu/files/2018-12/June_2009_Procedures.pdf

MIT

Resources:

- Article: Teaching and Learning with ChatGPT: Part 1
<https://tll.mit.edu/teaching-learning-with-chatgpt-opportunity-or-quagmire/>
- Article: Teaching and Learning with ChatGPT: Part 2
<https://tll.mit.edu/teaching-learning-with-chatgpt-opportunity-or-quagmire-part-ii/>
- Article: Teaching and Learning with ChatGPT: Part 3
<https://tll.mit.edu/teaching-learning-with-chatgpt-opportunity-or-quagmire-part-iii/>
- "MIT Class: Generative AI for Constructive Communication Evaluation and New Research Methods"
<https://ai4comm.media.mit.edu/>

GenAI not mentioned in:

- General Student Handbook on Academic Integrity
<https://handbook.mit.edu/academic>
- Policies on Academic and Research Misconduct and Dishonesty
<https://policies.mit.edu/policies-procedures>
- Office of the Provost Policies & Procedures
<https://provost.mit.edu/resources/#policies-procedures>
- General guide to Research Misconduct
<https://research.mit.edu/integrity-and-compliance/research-misconduct>

UNC Chapel Hill

Resources:

- Generative AI usage guidance for Instructors
<https://provost.unc.edu/student-generative-ai-usage-guidance/>
- Generative AI: Faculty & Student Resources
<https://provost.unc.edu/generative-ai-employee-resources/>
- The Writing Center: Generative AI in Academic Writing
<https://writingcenter.unc.edu/tips-and-tools/generative-ai-in-academic-writing/>
- Center for Faculty Excellence: Generative AI resources for UNC Instructors
<https://cfe.unc.edu/teaching-and-learning/teaching-and-technology/chatgpt-resources-for-unc-instructors/>

GenAI not mentioned in:

- Student Honor Code
<https://studentconduct.unc.edu/about-us/forms-documents/instrument/>

Stanford

Resources:

- Teaching and Learning Hub Resources on Teaching in the AI Era
<https://tlhub.stanford.edu/docs/teaching-in-the-ai-era/>
- Article: Pedagogic strategies for adapting to generative AI chatbots
<https://teachingcommons.stanford.edu/news/pedagogic-strategies-adapting-generative-ai-chatbots>
- Course Design: Analyzing the implications of AI
<https://teachingcommons.stanford.edu/teaching-guides/artificial-intelligence-teaching-guide/analyzing-implications-ai-your-course>

GenAI not mentioned in:

- Links to general policies and guidelines (Generative AI not mentioned)
<https://communitystandards.stanford.edu/policies-guidance>
- Under "Violations of the Honor Code," see Link re: Plagiarism (Generative AI not mentioned)
<https://communitystandards.stanford.edu/policies-guidance/honor-code>

Appendix C: RESI Mapping Project

Project lead and Committee liaison:

Ravit Dotan, PhD

Data Technology Ethics Consultant

Former Director of The Collaborative AI Responsibility Lab, Center for Governance and Markets

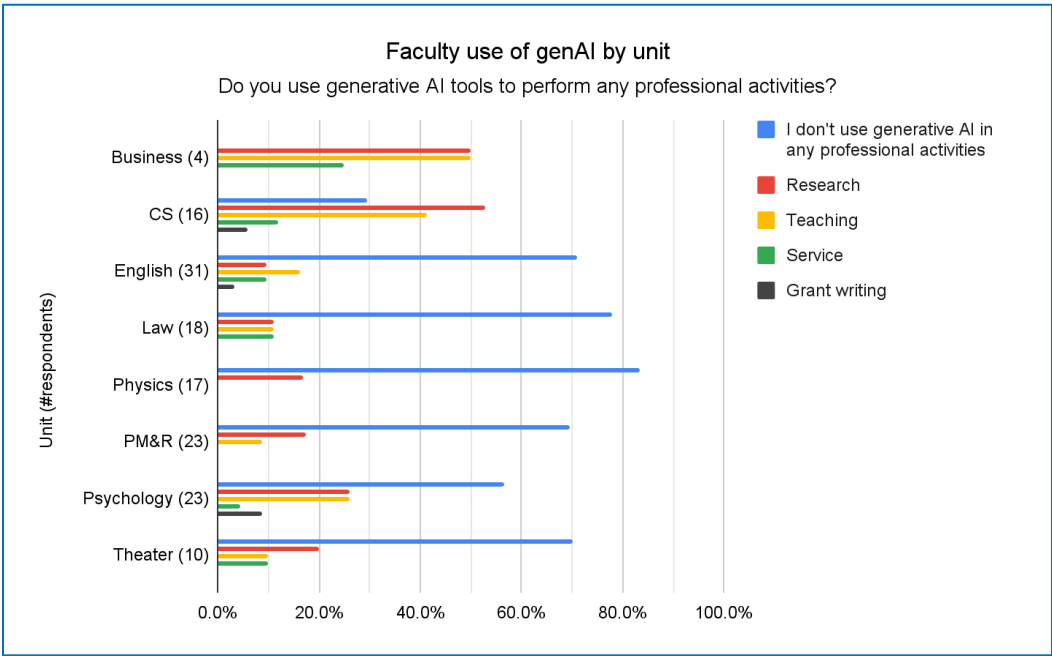
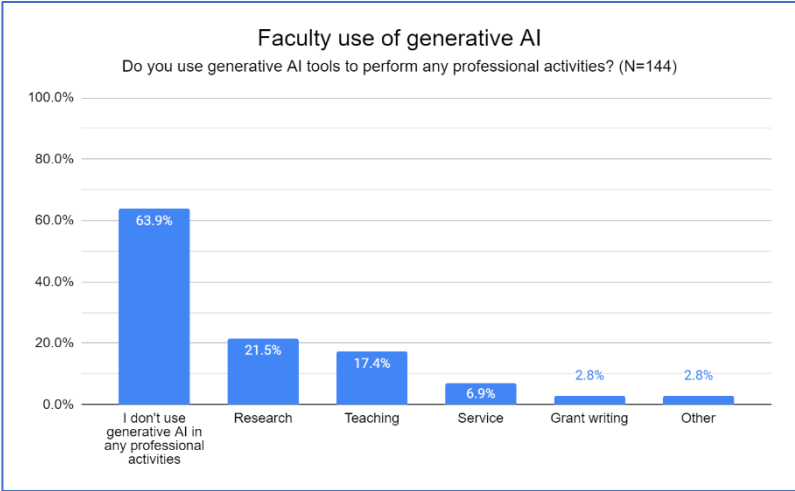
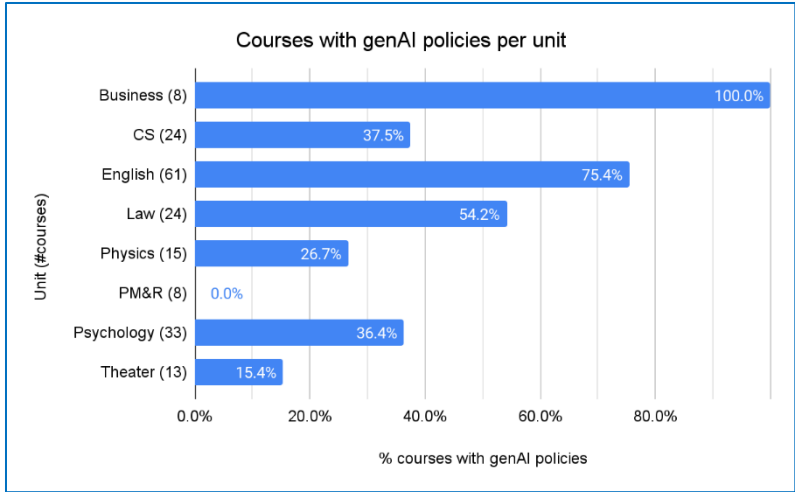
The Research, Ethics and Society Initiative (RESI) of the Office of Research (“Pitt Research”), with support from the Senior Vice Chancellor for Research, commissioned this Mapping Project to identify in Fall 2023, the degree to which Pitt faculty were using GenAI, the nature of those uses, and their attitudes and concerns about GenAI.

1. Methods

- **Participants** – Our engagement with faculty included eight units:
 - Business, Computer Science (CS), English, Law, Physical Medicine and Rehabilitation (PM&R), Physics, Psychology, and Theatre Arts.
- **Survey** – We asked faculty members to complete a brief survey about how they use GenAI. Overall, 144 faculty responded. The main two questions were:
 - “Do you use generative AI tools to perform any professional activities?” (multiple choice, check all activities that apply)
 - “How many courses are you teaching this semester? How many of them include policies about students’ use of generative AI”?
- **Focus groups** – We invited faculty from the same units to participate in small–group open–ended conversations to better understand their perspectives on GenAI. We held three meetings:
 - CS – 7 participants
 - Mixed (Business, English, PM&R) – 6 participants
 - Theatre Arts and Psychology – 6 participants

2. Survey Results

- **Overall use**
 - Most faculty don’t use GenAI in their professional activities at all (63.9%).
 - The top usage areas are research (21.5%) and teaching (17.4%).
 - Few faculty reported using GenAI in service work (6.9%).
- **Course policies**
 - About half of the courses taught by respondents in Fall 2023 had GenAI policies (50.5%).
 - However, only 38.4% of courses outside of the English department had these policies (Responses from English department faculty are skewing the overall results, because English department respondents taught many more courses than other respondents and had a high rate of GenAI policies.)
- **Variation** – There is substantial variation regarding GenAI use between departments. For example:
 - In Business and CS, most respondents did use GenAI. However, Business only had 4 respondents and they may be outliers.
 - English respondents use GenAI for teaching more than for research.
 - Physics respondents don’t use GenAI for teaching at all.
 - None of the RM&R courses had GenAI policies; 75.4% of English courses did.



3. Results from Faculty Conversations (Focus Groups)

- **Focus on teaching** – The conversations with faculty strongly focused on GenAI in the context of teaching. Even when explicitly asked about use of GenAI in research and service, faculty didn't have much to say. This observation stands in contrast to the survey results, which indicate that faculty use GenAI in research, and in some cases, even more than in teaching.
- **Key topics within teaching** – Topics of special interest were academic integrity, incorporating GenAI in assignments, and the impact of GenAI on the educational experience of students.
- **Variance of opinions regarding GenAI** – Faculty exhibited a range of views, from skepticism to enthusiasm about the role GenAI could have in teaching. There don't seem to be common denominators by department.
- **Variance of familiarity with GenAI tools** – Familiarity among respondents ranged from deep familiarity to a lack of understanding of the tools' limitations or the difference between GenAI and other forms of AI.

4. Overall Reflections

- **Challenges due to the lack of GenAI use** – The fact that most faculty don't use GenAI at all in their professional activities presents particular challenges for the University:
 - **Missing out on benefits** – First, GenAI has the potential to relieve burdens, save time, and even contribute to scientific breakthroughs. Faculty members who are unfamiliar with the tools cannot take advantage of them.
 - **Pitfall risk** – Second, insufficient familiarity with the limitations of the tools may lead to potentially problematic/harmful uses, such as using GenAI as a search engine or using GenAI to detect whether student papers are AI-generated (using tools that are unreliable and discriminatory).
 - **Underprepared for the impacts of GenAI on pedagogy, career paths, and society** – Third, faculty members who are unfamiliar with how they can use GenAI in their own work are likely underprepared to teach their students about how to take advantage of the tools, teach them how to use them responsibly and think about their use and output critically, or deal with GenAI-related academic dishonesty.
- **Challenges due to variance** – Faculty members vary in their opinions about GenAI, so the expectations of students with regard to GenAI may vary by course. However, only half of the courses taught by respondents had GenAI policies (or 38% if omitting English). Therefore, students may be confused about what is expected of them and may run afoul of implicit instructor expectations and be subject to academic integrity policy investigations.
- **Potential use of this study's findings** – The report from this study and the report of the Ad Hoc Committee are structured in a way that could contribute to faculty education. Making these documents available to faculty members may facilitate their learning about potential uses of GenAI, its limitations, and responsible use.

Appendix D: Journal and Publisher Policies Project

Project Lead and Committee Liaison:

Robin Kear, MLIS

Liaison librarian in the ULS Research and Educational Support Department
with

Aimee Jenkins, MLIS

ULS Lead Librarian for Bibliometrics & Liaison Librarian

The Research, Ethics and Society Initiative (RESI) of the Office of Research (“Pitt Research”), with support from the Senior Vice Chancellor for Research, requested that the library undertake this Journal and Publisher Policies Project in Fall 2023. Preliminary results were presented by Robin Kear during a RESI/Sara Fine Institute panel on Policies, Practices, and Ethical Concerns in Publishing, available [here](#).

1. Methods

- Journal Selection of top journals in wide-ranging areas
 - Journal Citation Reports (JCR) (established in 1975) was used. JCR is the most established and presented discrete relevant categories.
 - We considered using InCites Essential Science Indicators, but it is heavily focused on the sciences.
 - The top three journals in selected categories were determined by the 2022 Journal Impact Factor, a measure of the frequency with which the average article in a journal has been cited in a particular year.
 - SCIE (Science Citation Index Expanded), SSCI (Social Sciences Citation Index) and AHCI (Arts & Humanities Citation Index) were used due to a more stable selection of journals, not ESCI (Emerging Sources Citation Index).
- Subject Categories within JCR
 - JCR has 254 categories within 21 large disciplinary groups, with overlapping journals in the categories.
 - We established various criteria for selecting specific categories in the 21 groups, with objective and subjective considerations. We considered:
 - If Pitt has programs in this area.
 - If Pitt publishes in this area in Quartile 1 journals (highest impact factor) as determined by InCites.
 - When these criteria were met, we selected broader over narrow subjects.
 - The number of journals in that category, with preference for more journals.
 - Lastly, we spread subject selection across schools for representation.
 - We finalized 36 subject categories from the humanities, social sciences, and sciences.
- Finding Guidance on Artificial Intelligence (AI) use in journal articles from the Journals
 - We searched within the journal for editorials and editor's notes for terms like generative artificial intelligence, machine learning, GenAI, ChatGPT, artificial intelligence authorship.
 - We searched the publisher website for any instructions on AI authorship and use of AI.
 - We searched the journal website for any instructions on AI authorship (if separate from publisher website).

2. Concrete Findings

- AI cannot be an author. This was clear and consistent across publishers. AI cannot be considered a responsible party for content.
- AI use in writing must be disclosed with a description of use, but this varies among publishers.
 - The disclosure took different forms, a disclosure statement, acknowledgement, or a declarative statement, and was required in different sections.
 - Often there was an assumed conceptualization of the use of AI in writing, that it would mostly be used for improving readability and language, not the creation of new written content.
 - If AI was accepted in creation of new written content, there was some encouragement to share prompts used to create the content. Prompt sharing would help with reproducibility, if the same GenAI tool could be used, but this could be difficult as they are dynamic tools.
- The use of AI in images to enhance or manipulate information was generally not permissible. Most often it was not permitted and when a case by case review was offered, any use of AI in images should be disclosed in the image caption.
- The human author has responsibility for all journal article content, including whether a Large Language Model (LLM) or GenAI used in the article is accurate and using any copyrighted or plagiarized materials.
 - Because GenAI content cannot be independently verified and the software sometimes hallucinates facts and fills in its understanding gaps, it can be risky for an author to use and accept responsibility for AI content used in an article.
 - Publishers may want to decrease their potential liability for GenAI related content.

3. Nuanced Findings

- There was differentiation between AI in writing and use of AI in analyzing and data insight.
 - If mentioned in the guidance, AI use must be disclosed in the methods sections if used for analysis or research design.
 - AI tools other than GenAI could be used in analyzing data.
- Separate policies were common for authors, peer reviewers, and manuscript reviewers.
- Manuscripts should not be uploaded to a public GenAI tool during the review process, doing so violates confidentiality and the proprietary rights of the publisher.
 - Large publishers such as Elsevier could conceivably change their standing on this if they create their own GenAI or LLM tool for use by their journals.
- Different parts of the article and steps of the publication process are being considered separately and could have variable AI guidance in the future.

4. Peripheral Observations

- Publishers Elsevier, Springer Nature, and Sage have the most robust guidance.
- Committee on Publication Ethics (COPE) guidance on AI and authorship is often cited as an example to follow.
 - Example, from COPE: “Authors are fully responsible for the content of their manuscript, even those parts produced by an AI tool, and are thus liable for any breach of publication ethics.”
- Most often the journal referred to the publisher’s guidelines or duplicated from the publisher guidelines.

- Sometimes the journal guidance was slightly different than publisher guidance (the parent company). Authors should review both sets of guidance.
- Sometimes the parent publisher doesn't have a statement on AI use (yet).
- Editorial guidance from within the journal editorials was rarer, Nature was a notable exception, which came out early in January 2023.

5. Reflections

- Acceptance of the use of AI in journal articles could change over time and fade further into the background as use becomes more accepted.
- AI tools will continue to reflect the best and worst of humanity and reflect back to us problems and challenges that already exist in the publishing world and society at large.
 - There is potential for abuse of AI tools by authors in publication and there are not yet tools that reliably detect AI or GenAI use.
 - There is potential for abuse by unscrupulous publishers to deceive potential authors by using GenAI to polish websites and create fraudulent articles.
 - Use of AI tools create further concerns for the reproducibility of research.
- Several core principles of research and sharing that research, including transparency, integrity, attribution, and accountability, continue to guide journal article publication and should continue to guide any use of AI in journal article publication.

Appendix E: GenAI and Student Assignments

For homework, in-class assignments, exams, and student research, some types of assignments make cheating by using GenAI more difficult or may require students to use or reflect upon GenAI critically. The Center for Teaching and Learning has already curated materials instructors can use the designing assignments ([here](#)). Below are ideas articulated in Committee meetings and the Mapping project's focus groups.

1. Assignments Incorporating GenAI

- **Analyzing AI-generated output** – The instructor presents the students with a generated output, such as a text, an image, a code, or a solution to a math problem. The students are asked to analyze this output. For example:
 - **Identify themes** – The instructor generates a text/code/math proof/other outputs that illustrate themes discussed in class. Students are asked to identify these themes.
 - **Identify deficiencies** – The instructor generates a text/code/math proof/other outputs that illustrate mistakes or other deficiencies (including biases) that are relevant to the class. Students are asked to identify the problems and fix them.
- **Revising AI-generated first drafts** – The students are asked to use GenAI to generate the first version of an assignment, such as a list of ideas, an outline for a paper, a summary of a paper, a piece of code, or an analysis of some data. Then, they are asked to improve on this first draft, explain how they did it (e.g., which prompts they used and how they improved the output), and to reflect critically on the process.
- **Interlocutor** – Students write a text/code/math proof/other outputs themselves. Then they ask GenAI to criticize their output. For example, students could assign to the GenAI different personas and ask for various critiques. Students then improve their initial product based on the interaction, describe the process, and critically reflect on it.
- **Generate practice questions** – Students who want additional practice could use GenAI to generate additional study questions. For example, they could feed into the GenAI old exam questions and ask for new questions in the same style. Another way is to feed an article into the GenAI and ask for questions about that paper in the style of questions from old exams. Instructors can suggest best practices for using GenAI as a practice question generator.

2. Assignments to Make Cheating Using GenAI More Difficult

- **Oral components** – Instructors may incorporate and assess oral components into their courses, e.g., oral exams, in-class presentations.
- **Limit access to GenAI** –
 - Instructors may employ in-class assignments that do not permit access to the Internet or GenAI.
 - Block GenAI use – Instructors may use tools that don't permit students to switch between tabs while working on the assignment (such as LockDown Browser). However, employing such tools may create accessibility problems. Also, students could use other devices to access GenAI; however, their use would be more complicated capable of being monitored/detected than accessing multiple tabs on one device.

- **Annotation** – Students may be asked to annotate a text, e.g., to offer comments on an assigned reading. In collaborative annotation assignments, they respond to one another, build threads of commentary on the text, and may engage with the instructor. One Mapping Project participant noted that tools such as [Perusall](#) can be helpful.
- **Mind mapping** – Asking students to generate mindmaps of arguments they are reading or presenting may help ensure that they are actively engaging with the material, particularly if they develop the mindmaps collaboratively with their peers.
- **Structured assignments** – A common thread in annotations and mindmaps is that they do not focus on the production of a text. Instead, the student produces content in a structured way. Cheating by using GenAI is still possible, but would be less straightforward and may require more critical thinking even if GenAI is used. Instructors can keep this in mind and come up with other forms of structured assignments.

Appendix F: AI and GenAI Initiatives and Curricular Programs at Pitt

AI / Generative AI Initiatives and Curricular Programs (visible as of February 29, 2024)

Name	Sponsor, host, home	Contact
AchievFairness in AI –Assisted Mobile Healthre Apps through Unsupervised Feder Learning	School of Engineering, Dept of Dermatology (SoM)	Jingtong Hu (PI), jthu@pitt.edu Alaina James, jamesaj@upmc.edu
AI and Algorithmic Accountability Initiative, Institute for Cyber Law, Policy and Security	School of Law	Beth Schwanke, beth.schwanke@pitt.edu cyber@pitt.edu
AI and Effects of Health Inequities (Can AI Help Address the Effects of Health Inequities?)	Dept of Health Information Management, SHRS	Yanshan Wang (PI), yanshan.wang@pitt.edu
AI and Neuroscience Reading Group	Depts of Philosophy and History and Philosophy of Science	Lotem Elber–Dorozko, lotem.elber@mail.huji.ac.il
AI Applications Working Group	Learning Research & Development Center (LRDC), School of Computing and Information (SCI), and Center for Teaching and Learning (CTL)	Jennifer Iriti, iriti@pitt.edu
Artificial Intelligence (research group)	Department of Computer Science, SCI	
Artificial Intelligence and Law Group	SCI, School of Law	Kevin D. Ashley, ashley@pitt.edu
Center for Artificial Intelligence as a Human Practice at the University of Pittsburgh (grant proposal submitted to https://www.neh.gov/program/humanities-research-centers-artificial-intelligence)	DSAS+	Annette Vee, annettevee@pitt.edu and Alison Langmead adlangmead@pitt.edu
Center for Artificial Intelligence Innovation in Medical Imaging (CAIMI)	UPMC Schools of Business and Engineering, and SCI CMU’s School of Comp Sci, Engineering, Information Systems and Public Policy, Robotics Institute, Human–Computer Interaction Institute	Shandong Wu, wus3@upmc.edu
Center for Clinical Artificial Intelligence (CCAI)	Dept of Biomedical Informatics	Shyam Visweswaran, shv3@pitt.edu
Center for Integrative Research in Computing and Learning Sciences (CIRCLS)	LRDC	Erin Walker (Co–PI), eawalker@pitt.edu Diane Litman (Advisor), litman@cs.pitt.edu
Community of Practice: Generative AI in SCI Teaching Project Team	SCI	Diane Litman, dilitman@pitt.edu Nora Mattern, emm225@pitt.edu

		Rebecca Morris, RJMORRIS@pitt.edu Lindsay Onufer, LRO8@pitt.edu Marcia Rapchak, MRAPCHAK@pitt.edu
Computational Pathology and AI Center of Excellence (CPACE)	SoM UPMC	Hooman Henry Rashidi, hhr5@pitt.edu
Data Science Task Force – Report Recommendations	Office of the Provost	Mike Holland, mike.holland@pitt.edu
Digital Media Reading Group	English Dept’s Literature Program	Annette Vee, annettevee@pitt.edu
Evaluation for Learning Group	LRDC	Jennifer Iriti, iriti@pitt.edu
Future Adaptive Collaborative Educational Technologies (FACETLab)	LRDC	Erin Walker (PI), eawalker@pitt.edu
The Future of Law in Technology and Governance	Center for Governance and Markets, GSPIA	Mike Madison, madison@pitt.edu
Future of Science Initiative	CMU	Nancy Felix, mcs-advancement@andrew.cmu.edu
Generative AI Learning Cohort	SFI and RESI	Nora Mattern emm225@pitt.edu
Grappling with AI, Education, and Our Speculative Futures	School of Education	M. Beatrice Dias (PI), beadias@pitt.edu
Health + Explainable AI (Pitt HexAI) Research Laboratory	Dept of Health Information Management, SHRS	Ahmad P. Tafti, tafti_ahmad@pitt.edu
Learning Sciences Artificial Intelligence (LSAI) Education Hub (Explorations of GenAI for analyzing and scoring open-ended student responses on tests and surveys and use of GenAI to develop advising suggestions for future coursework based upon student performance on assigned tasks in present courses)	CTL, LRDC, SCI	Mike Bridges (CTL), mbridges@pitt.edu Charles Perfetti (LRDC), perfetti@pitt.edu Bruce Childers (SCI), childers@pitt.edu (Michael Bridges, Alan Lesgold, Nathan Ong, Charles Perfetti, John Radzilowicz)
Mapping Project on Generative AI Use @ Pitt	RESI	Lisa S. Parker, lisap@pitt.edu and Ravit Dotan, contact@ravitdotan.com
Medication Error Avoidance at Region Scale (MEARS) study (Pitt Clinical AI Drives Patient Safety Research in JHF Initiative)	Department of Biomedical Informatics (SoM), and Schools of Pharmacy and Public Health	Richard D. Boyce (PI), rdb20@pitt.edu
Multicenter Implementation of an Electronic Decision Support System for Drug-Associated AKI (MEnD-AKI) - National Institute of Diabetes and Digestive and Kidney Diseases	School of Pharmacy	Sandra Kane-Gill (PI), Kane-Gill@pitt.edu

Natural Language Processing Group/Seminar. https://pitt-nlp-seminar.github.io/pitt_nlp_seminar_2024/	SCI	Lorraine Li, xianglli@pitt.edu Diane Litman, dilitman@pitt.edu
Partners for Network Improvement	LRDC	Jen Iriti, iriti@pitt.edu
Pitt AI Scholar Teacher Alliance (PASTA)		Mike Madison (convenor), madison@pitt.edu
Pitt EducaTional And Language technology lab (PETAL)	LRDC/SCI	Diane Litman, litman@cs.pitt.edu
Race and Justice in Design and Technology Reading Group	English Dept's Literature Program	Jessica FitzPatrick, jlf115@pitt.edu
Responsible Data Science		Michael Colaresi, mcolaresi@pitt.edu
Social Justice and Tech Reading Group	SFI and RESI	Nora Mattern, emm225@pitt.edu and Bridget Keown, keown.b@pitt.edu
ULS Project on Publication Policies Regarding Generative AI	ULS	Robin Kear, rlk25@pitt.edu
Use Natural Language Processing (NLP) to Improve the Utility of Clinical Decision Support (CDS) β-lactam Allergy Alerts and Promote Informed Allergy Evaluation	School of Pharmacy, and Department of Biomedical Informatics (SoM),	Sandra Kane-Gill Kane-Gill@pitt.edu Richard D. Boyce rdb20@pitt.edu
The Vis Lab	Dept of Biomedical Informatics (SoM), Intelligent Systems Program, and the Clinical and Translational Science Institute	Shyam Visweswaran (PI), shv3@pitt.edu
Working Group on Ethics of AI	UPMC/SoM	José Francisco Abad, ABADJ@pitt.edu , abadjf@upmc.edu Olga Kravchenko, kravchen@pitt.edu
Year of Data and Society, 2022–2023	Office of the Provost	Nora Mattern, emm225@pitt.edu

AI / Generative AI Curricular Programs (visible as of February 29, 2024)

Name	Sponsor	Contact
Big Analytics Graduate Certificate	SCI	
Cybersecurity, Policy, and Law Graduate Certificate	SCI	
Data Science Major	SCI	
Digital Narrative and Interactive Design (DNID) Major	DSAS, SCI	
Intelligent Systems Doctoral Degree	SCI	
Intelligent Systems Program (ISP)	DSAS; GSPIA; Schools of Education, Engineering, Medicine, and Law; SCI; SHRS	Peter Brusilovsky, peterb@pitt.edu
Master of Data Science	SCI	

Proposed Doctoral Program in Responsible Computing Research Policy and Practice, under development	DSAS, Engineering, GSPIA, Law, SCI, SPH	Lara Putnam, lep12@pitt.edu , Annette Vee, annettevee@pitt.edu , and Alison Langmead, adlangmead@pitt.edu
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Appendix G: Pitt-sponsored Events on GenAI

February 2023 – Spring Term 2024 (visible as of 2-29-24)

Methods of collection: submissions by Committee members and mining the University calendar, but omitting many of the numerous offerings of the Center for Teaching and Learning and of Pitt IT

Date	Name	Sponsor
2-17-2023	ChatGPT: The Evolution of Generative AI Tools and Implications for Teaching	University Center for Teaching and Learning (CTL)
2-27-2023	The Ethics & Regulation of Generative AI	Pitt Cyber, Center for Governance and Markets
3-1-2023	ChatGPT Implications and Applications: A Faculty Panel	Office of the Provost, CTL
3-3-2023	Toward Automatically Identifying Legally Relevant Factors	Intelligent Systems Program
3-14-2023	Teaching the Artificial Student: AI and Pedagogy	CTL
3-23-2023	Embracing Change: ChatGPT in the Classroom	SCI
3-24-2023	Biomarker Discovery from Rat Gene Expression for Intervertebral Disc Degeneration	Intelligent Systems Program
3-24-2023	Using the SHAP Method to Produce Explanations of Predictions in Clinical Alerting Systems	Intelligent Systems Program
3-28-2023	Harnessing Human-AI Synergy to Make the Smart Classroom More Human and Effective	School of Computing and Information (SCI)
4-4-2023	Unsettled: Frames for Examining Generative Artificial Intelligence	Senate of the University of Pittsburgh
4-6-2023	The Work of Future: Where Will it Come From?	Dept of Economics
4-6-2023	Generative Comics Workshop with Ebony Flowers	Center for African American Poetry and Poetics
4-7-2023	User Control in Adaptive Information Access	Dept of Comp Sci
4-10-2023	How to Make Ideas Happen with AI	Big Idea Center of the Innovation Institute
4-12-2023	Governing Smart Cities as Knowledge Commons with Mike Madison	Pitt Cyber, Center for Governance and Markets
4-14-2023	Extracting Physical Rehabilitation Exercise Information from Clinical Notes: A Comparison of Rule-Based and Machine Learning Natural Language Processing Techniques	Intelligent Systems Program
4-14-2023	Human Not in the Loop: Objective Sample Difficulty Measures for Curriculum Learning	Intelligent Systems Program
4-19-2023	Addressing Dataset Bias and Computational Efficiency when Training Neural Networks	Dept of Computer Science
4-19-2023	ChatGPT Wrote this Title: Exploring the Impact of AI on Our Minds and Society	DSAS
5-4-2023 – 5-11-2023	Short Course on Generative AI (4 session short course)	Research, Ethics and Society Initiative (RESI) of Pitt Research
6-21-2023 – 6-22-2023	CMU-K&L Gates Conference on Ethics and Artificial Intelligence	CMU and K&L Gates Foundation

7-14-2023	Toward Socially Responsible AI: When Machines Fail, We Rise	SCI
7-20-2023	Learning Explainable Predictive Latent Clinical Concepts (proposal defense)	Dept of Computer Science
7-27-2023	Chat GPT and Artificial Intelligence: Helping Humans in Caring for Children	Dept of Pediatrics
7-31-2023	Physics and AI Driven Anomaly Detection in Cyber Physical Systems	SCI's Dept of Informatics and Networked Systems
8-24-2023	Generative AI and the Future of Creativity	Information Technology
9-8-2023	AI in Healthcare Applications for the Large Language Model Era	Dept of Health Informatics
9-8-2023	Deep Neural Network Learning Biological Condition Information Refines Gene-expression-based Cell Subtypes	Intelligent Systems Program
9-15-2023	Social Justice and Tech Reading Group: More Than a Glitch by Meredith Broussard	Sara Fine Institute, SCI
9-15-2023	Teaching Writing in the Context of AI Tools	Writing Institute
9-20-2023	Grappling with AI, Education, and Our Speculative Futures Study Group: What is "Intelligence"?	School of Education
9-29-2023	RESI Interdisciplinary Discussion Series: Generative AI and Digital Humanities	RESI
9-29-2023	Social Justice and Tech Reading Group: More Than a Glitch by Meredith Broussard	Sara Fine Institute, SCI
9-29-2023	TextGenEd Book Launch Event	English Dept's Composition Program
10-13-2023	Social Justice and Tech Reading Group: More Than a Glitch by Meredith Broussard	Sara Fine Institute, SCI
10-13-2023	Probabilistic (Commonsense) Knowledge in Language	Intelligent Systems Program
10-14-2023	Medical Ethical Challenges in Artificial Intelligence and Other Applied Technologies	Dept of Pediatrics
10-18-2023	Grappling with AI, Education, and Our Speculative Futures Study Group: Grappling with Safety and Power	School of Education
10-26-2023	Introduction to ChatGPT Prompt Engineering for Teaching	CTL
10-26-2023	Writing Machines	Humanities Center
10-27-2023	RESI Interdisciplinary Discussion Series: Generative AI in/as Theater and Performance	RESI
10-27-2023	Generative AI and Pedagogy: Values and Opportunities (recording)	Sara Fine Institute, SCI
11-2-2023	Personalization in the Age of Cyber-Physical-Social Systems	Dept of Informatics and Networked Systems, SCI
11-3-2023	Boosting Weakly Supervised Object Detection using Fusion and Priors from Hallucinated Depth	Intelligent Systems Program
11-9-2023	Data and the Digital Future	RESI
11-10-2023	Generative AI and Research: Policies, Practices, and Ethics in Publishing (recording)	Sara Fine Institute, SCI

11-10-2023	RESI Interdisciplinary Discussion Series: Archives, Data Storage, and Surveillance	RESI
11-10-2023	Divide and Conquer: Carving Out Concept-based Models out of BlackBox for More Efficient Transfer Learning	Intelligent Systems Program
11-10-2023	An Interpretable Deep Learning Framework for Genome-informed Precision Oncology	Intelligent Systems Program
11-16-2023	Generative AI, Everywhere, All at Once – Your Everyday Survival Guide to Thinking Machines	Bioengineering, Chemical and Petroleum Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Industrial Engineering, Mechanical Engineering, Mascaro Center for Sustainable Innovation
11-17-2023	Generative AI: Classroom Perspectives and Academic Integrity	Swanson School of Engineering
11-17-2023	AI Fairness in Medical Image Segmentation	Dept of Health Information Management, SHRS
11-17-2023	Probabilistic (Commonsense) Knowledge in Language	Dept of Computer Science
11-28-2023	Image-text Alignment Uncovers Sources of Supervision for Object Detection-oriented Multi-modal Deep Learning Models (dissertation defense)	Intelligent Systems Program
11-30-2023	Visual Misinformation Exhibit	Health Sciences Library System
12-1-2023	Can GPT Alleviate the Burden of Annotation?	Intelligent Systems Program
12-1-2023	Investigating the Role of Attribute Context in Vision-Language Models for Object Recognition and Detection	Intelligent Systems Program
12-9-2023 – Jan 2024	Visual Misinformation Exhibit	
12-14-2023	Socially and Ethically Responsible AI for Sustainable Development: Bringing Invisible Millions at the Center of the AI Revolution	Dept of Informatics and Networked Systems, SCI
1-19-2024	Generative AI in Assessment of Student Learning	RESI & Sara Fine Institute, SCI
1-23-2024	Integrating Generative AI Into Teaching and Learning	CTL
1-25-2024	Towards Deployment of AI-based Clinical Decision Support	ISP, SCI
1-26-2024	Interdisciplinary Dialogs on Generative AI	RESI
2-9-2024	Generative AI: Productivity and Academic Values	RESI & Sara Fine Institute, SCI
2-14-2024	Grappling with AI, Education, and Our Speculative Futures Study Group: Hidden Labor & Hidden Costs	School of Education
2-17-2024	Developing Pedagogy with Generative AI: An Interdisciplinary Workshop for Graduate Students	RESI
2-23-2024	Interdisciplinary Dialogs on Generative AI	RESI
2-23-2024	Graduate AI Innovations and Networking (GAINS) Workshop	DSAS
2-27-2024	Interpretable Deep Generative Models	SCI
3-1-2024	Generative AI and the Future of Business	Katz School of Business

3-7-2024	Evaluating Generative AI for your Research Workflow	Health Sciences Library System
3-20-2024	Unlimited Creativity with Generative AI	Pitt IT
3-27-2024	Grappling with AI, Education, and Our Speculative Futures Study Group: Collective Futures	School of Education
3-29-2024	Interdisciplinary Dialogs on Generative AI	RESI
Spring 2024	<p>Data Ethics Across the Disciplines Series</p> <ul style="list-style-type: none"> • February 23: Global Perspectives on Ethical Data Management • February 26: Social Media Data Ethics • March 1: Pedagogy, Data Governance, and Predictive Analytics • March 4: Community-centered Ethics for Digital Cultural Heritage Materials • March 22: Truth versus Authenticity: Exploring the Ethical Paradoxes inherent in the Digital Representation of Text Data 	ULS & RESI