

Accountability in the Classroom in the Era of AI

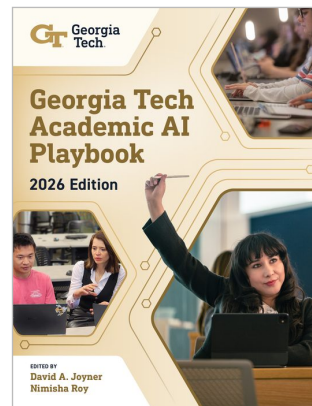
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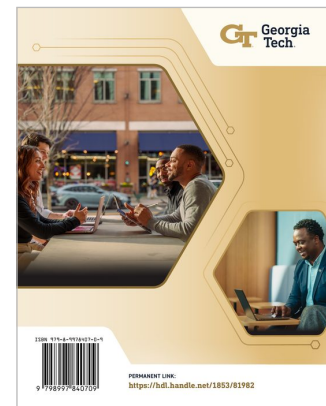
About the Playbook

The Georgia Tech Academic AI Playbook collects stories of how artificial intelligence is being used, taught, and responded to in Georgia Tech classrooms. The 2026 Edition gathers 67 articles from faculty, staff, and researchers across every college at Georgia Tech, along with the Library, the Center for Teaching and Learning, the Georgia Tech Research Institute, the Office of Information Technology, and the Provost’s Office.

Each article is a “play”: a specific initiative carried out in a real course, documenting the prior context, the actions the instructor took, the results, and the lessons learned. The volume closes with 20 lessons synthesized across the full collection.



Front cover



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Title: Accountability in the Classroom in the Era of AI

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Categorization: Reacting to AI

Sub-Categorization: Pedagogical Redesign in Response to AI

Formation

This initiative was designed in response to the rapid adoption of large language models (LLMs) and other generative AI tools by students in technical courses. It was implemented across two introductory machine learning and artificial intelligence courses, ECE 2028 and ECE 6252. Rather than treating these tools only as a threat to academic integrity, the instructors sought to integrate them into the learning process in a structured and accountable way. Students were encouraged to use off-the-shelf AI tools from providers such as OpenAI, Anthropic, Google, and Microsoft to brainstorm technical ideas, critique experimental setups, debate ethical positions, write code, and copy-edit their work. To maintain accountability and document the impact of these tools on students' thinking, experimentation, and writing, students were asked to upload weekly chat logs as project deliverables.

The motivating premise was that students are already aware of and actively utilizing AI tools in their academic and personal lives. A blanket ban on these tools would be difficult to enforce and could also limit meaningful learning opportunities. At the same time, unrestricted use of AI creates risks: students may over-rely on generated outputs, accept inaccurate claims, or submit work that reflects the model's reasoning more than their own. These risks are especially significant in semester-long project assignments, where students may only submit a final report and where instructors have limited visibility into the learning process that produced it. As a result, the project was redesigned as a formative assessment with regular uploads, instructor feedback, and a debate-style structure that required students to interact repeatedly with their project partners and with AI tools.

The initiative therefore framed AI use as a learning tool that needs to be accounted for via uploading chatlogs. These logs served two purposes. First, they helped instructors observe students' learning trajectories across the semester. In a traditional project submission, instructors only see the final report, code, or presentation. Weekly chatlogs created a longitudinal record of students' interactions with AI tools, including early brainstorming, technical troubleshooting, debate preparation, experimental design, and revision. This made it possible to distinguish between students who were using AI to deepen their thinking and students who were using it to generate finished text. Second, the logs discouraged simple regurgitation of AI-generated responses. Because students knew that their interactions could be reviewed, they had an incentive to engage more deliberately with AI outputs. The requirement encouraged them to ask follow-up questions, compare alternatives, challenge claims, and adapt responses to their own project goals. In this sense, the formative and debate-style pedagogical design helped instructors in quantifying accountability and helped students to develop better habits of AI use.

In addition to helping students and instructors during the project phase, the initiative allowed the retrospective creation of a dataset that can be used to study patterns in prompting, revision, technical reasoning, ethical argumentation, and dependence on model outputs. This dataset can help instructors

better understand both the benefits and risks of AI tool use for student learning, while also informing future course design.

Action

Students were divided into groups of two. Each team was given an AI-adoption and ethics-related topic that did not have a one-shot solution. Project partners chose their dual viewpoints within the topic. The goal of the project was to have debates between project partners to defend their viewpoints. Defense included conducting experiments using machine learning techniques that were taught in class, argumentation, and debate preparation. Students were encouraged to use any available AI tools for mock debates, opposition research, technical clarification, coding assistance, experimental design, and writing support. After the debate and final report were submitted, students evaluated the debate performance and project report of another team whose topic was adjacent to their own. For the sophomore class in ECE 2028, specific experimental setups and datasets were suggested for each of the topics while it was left open-ended for the graduate course ECE 6252.

The project was changed to a formative assessment. Students submitted the following:

1. Initial progress report within 2 weeks of project announcement
2. Chatlogs every week from the initial progress report to the end of the semester
3. Debate to be held and the video posted 4 weeks after the initial progress report
4. Final report to be uploaded 1 week after the debate.
5. Debate video and final report assigned to teams 2 days after final report submission
6. Peer review to be uploaded 5 days after assignment

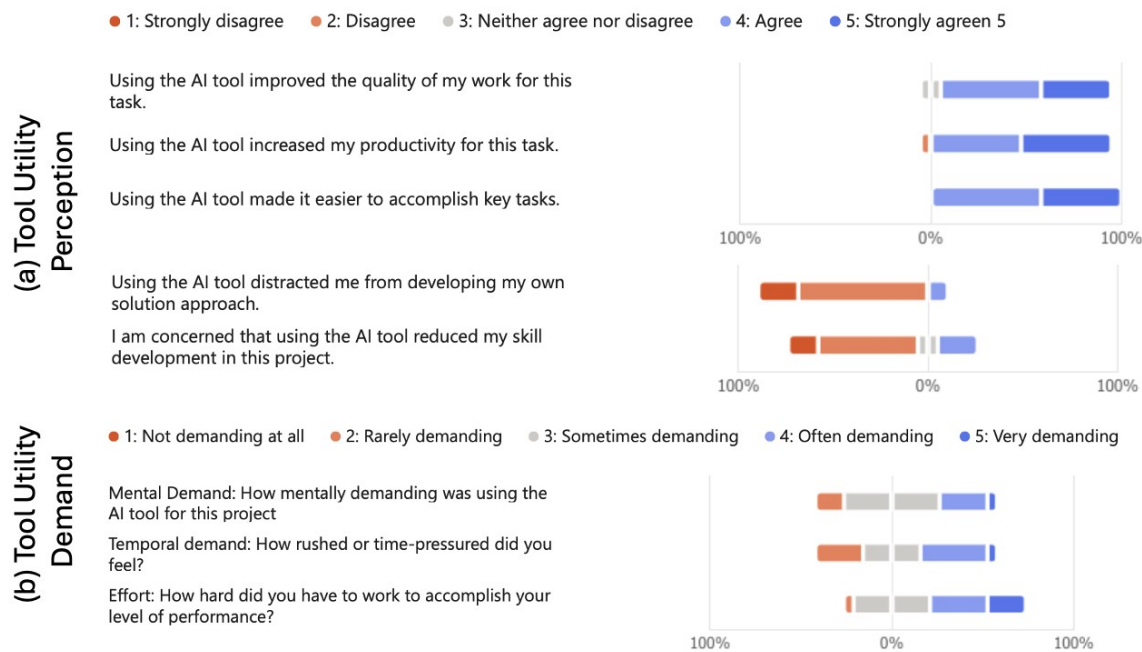
Across all these milestones, students would interact with the AI tools, then with instructors and their project partners, and then again with the AI tools. The chatlogs recorded longitudinal changes in student-AI interactions. Instead of simply prompting AI for what they need, students would challenge and refine their views. The initiative's structure was intended to shift AI use from simple answer-seeking toward iterative refinement, critique, and deeper engagement with technical and ethical questions.

Result

Students were provided a survey to fill out regarding their experiences using AI tools during the project. Selected questions and aggregated responses from students in ECE 2028, are shown in Fig. 1. The survey asked students to evaluate both the perceived utility of the tools and the level of demand associated with using them. The responses suggest that students generally viewed AI tools as beneficial to their project work. Most students agreed or strongly agreed that the tools improved the quality of their work, increased their productivity, and made it easier to accomplish key project tasks. Additionally, the survey suggests that students did not generally perceive AI use as harmful to their own learning. For the negatively framed items, most students disagreed or strongly disagreed that AI tools distracted them from developing their own solution approach. Similarly, most students did not express strong concern that AI use reduced their skill development in the project. The survey responses suggest that, under the accountability structure of weekly chat-log submission and staged project milestones, students tended to perceive AI as supporting rather than replacing their own learning process.

The survey also measured tool demand, including mental demand, temporal demand, and effort. Responses were more mixed for these items. Students did not uniformly describe AI use as undemanding. Many reported that using the tool was sometimes, often, or very demanding. This result suggests that productive AI use required work from students. They had to formulate prompts, interpret responses, revise outputs, and decide when to trust or challenge the tool. Thus, the survey results reinforce a key

premise of the initiative: AI tools can improve perceived productivity and work quality, but effective use still requires critical judgment, time, and effort.



Figure

1: Survey results from ECE 2028. Students rated on a 5-point Likert scale. Colors indicate response categories, and the x-axis shows the aggregate percentage of student responses for each category.

Lessons

- **Lesson 1:** A key lesson is that AI use becomes more pedagogically useful when it is tied to repeated formative checkpoints. The weekly chat-log submissions, progress report, debate, final report, and peer review created a structure in which students received both explicit and implicit feedback throughout the semester. This structure also gave instructors a more detailed view of the process behind the final submission and held students accountable. The initiative, together with the resulting dataset, provides a basis for studying and supporting responsible AI use in classrooms.
- **Lesson 2:** Future versions of the initiative should provide clearer instructions for exporting and submitting AI chatlogs, including a requirement that logs be exported in English. The instructors also found that downloading and organizing longitudinal data from Canvas can become difficult when the same assignment is used for weekly chat-log uploads. Canvas defaults to the final submission, so downloading weekly logs requires manually retrieving individual student files. A more systematic data-collection structure would help. For example, each team could be assigned a parent folder in Georgia Tech SharePoint, with each student maintaining weekly subfolders for their own logs. This would make the complete chat-log export easier to curate and analyze.
- **Lesson 3:** Finally, this initiative should be tested beyond AI and machine-learning courses. Students in ECE 2028 and ECE 6252 already had some technical familiarity with the tools and concepts involved. The instructors would like to repeat the initiative and welcome collaborations across the Institute, including in non-AI/ML classes. Extending the initiative to other disciplines would help clarify student interactions with models, without formal AI training for using these tools. It would add to the knowledge of accountability structures that best support responsible learning across disciplines.