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ChatGPT as a Tool for Equitable Education in Engineering Classes

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Introduction

2022 is set to go down in history as the year that the world met ChatGPT – a generative AI tool designed to accept text-based input and perform a large variety of tasks such as answering questions, writing text, summarizing content, generating code, and many more. Trained on the large language model GPT-3/3.5 [1], ChatGPT has also found its way into educational contexts, as high schools, colleges and universities are being faced with navigating the challenges that classroom usage of ChatGPT brings. Most arguments in this space have been that using ChatGPT for coursework veers dangerously close to academic dishonesty and brings up questions about plagiarism whereby students would use it to write essays and writing assignments for them (e.g., [2]–[6]), resulting in policies being instituted by instructors to ban ChatGPT in their classrooms [7].

While I recognize the merits of this argument and other research in the field on the Western-centric approaches it takes, as well as the harms it causes and negative biases and stereotypes it propagates (e.g., [8]–[10]), I present an argument in this paper that ChatGPT is an important tool for creating equitable access, especially for international students or students with traditionally marginalized identities in engineering education. I present this from the positionalities of student educators in engineering courses with reading and writing components and as international students in the US having relied on machine translation in their own student experiences. Using an approach similar to Coppola and Turns [11], I draw upon findings gathered from interviewing other instructors of engineering courses within my department, as well as a reflection of my own experiences as an instructor in engineering courses. I present microcultures of student experiences of using ChatGPT affordances such as content comprehension and summarization, synthesizing a set of titles into generating paper outlines, using machine translation to translate English readings into other languages that they are more comfortable in, and many others. I conclude with recommendations on framing the conversation around ChatGPT usage in classes, ensuring students do not violate academic integrity while also having equitable access to course content.

Background

Inequitable Practices in Engineering Education

The field of engineering education, like most others, is not without several practices that create inequitable outcomes for students. Within the US, a large portion of this pedagogy is designed for a student who is white, neurotypical, able-bodied, and male-identifying [12], and there is a substantial body of work that recognizes how engineering classrooms can be unwelcoming of identities outside of these. While such an unwelcoming atmosphere against a traditionally marginalized identity can be created when a majority of students hold a privileged identity (e.g., [13], [14]), this can also be the result of specific course practices or pedagogical trends within each field. For instance, when a design studio course heavily focuses on sketching practice or affinity mapping that encodes data within Post-it color, it is exclusionary towards

blind and low-vision students [12]; university makerspaces not stocking hair ties or smocks exclude female-presenting students by design [15], instructors consciously or subconsciously devaluing the intellectual capabilities of students of color [16] and courses heavily reliant on memorizing content such as formulae or definitions disadvantage students with ADHD who might struggle with rote learning [17]. Therefore, students who hold one or more of these marginalized identities might find themselves excluded within their classrooms.

However, even domestic students who do not hold traditionally marginalized identities might find themselves struggling in engineering courses at the college level, and that can be attributed to the differences in schooling that such students experience before they get to the same college classroom. Walden et al. [18], in their recommendations for stronger practices of equity and inclusion in engineering courses, noted how understanding students' academic pathways is important towards such an endeavor, as they propose recommendations along these lines. For instance, they caution how a student's lack of success in a particular discipline of engineering might not be indicative of their general ability to succeed in engineering, as they might find success in a different discipline. This is particularly important for my department and courses (described below), which blend elements of design and engineering, and often rely on larger volumes of reading than common within engineering courses.

Another identity which faces inequitable practices in US engineering education is that of being an international student. While Big Tech within the US extensively rely on international student labor [19] which leads to a conception of them, particularly international students from Asian countries, as a 'model minority' [20], they still face substantial challenges and inequitable outcomes in engineering classrooms. In particular, international students who have low proficiency in English face what Matters et al. [21] term 'structural exclusion', as they fall behind their peers who can better digest course readings in English and perform better on writing assignments. Furthermore, instructors might often make references while explaining something to US pop culture or literature that domestic students grow up consuming, leading to a gulf in understanding between domestic and international students.

Practitioners of engineering education have a responsibility to work towards alleviating such inequities in their classrooms through a pedagogy of care centered around a recognition of such practices as ableist and discriminatory against students who hold identities traditionally marginalized in engineering classrooms ([12], [22]). As they work towards such alleviation, they often leverage tools and resources that traditionally marginalized students can use to achieve course learning objectives at similar levels and draw more benefit from as opposed to those without such identities.

In this paper, I advocate for ChatGPT being one such tool. While the focus of the exploration initially was on international students, I also discovered ways in which domestic students use ChatGPT to succeed in their classes.

ChatGPT: Pros and Cons, and Usage in the Classroom

ChatGPT is a conversational chatbot developed by artificial intelligence company OpenAI, built upon their proprietary large language models GPT-3/3.5/4 [1], and soon boasted the world's largest user-base within the first three months of its launch [23]. It is designed to

receive text-based prompts as user input, and returns text- or image-based outputs. ChatGPT is designed as an all-inclusive solution for a large range of queries, from ones with objective responses (e.g., math problems, trivia questions, etc.) to those necessitating a more discursive response (e.g., argumentative essays, summarizations, etc.).

Given its extensive capabilities, ChatGPT has found widespread usage across a variety of domains, such as generating marketing materials (e.g., [24], [25]), support with programming tasks (e.g., [26], [27]), preliminary medical diagnoses (e.g., [28], [29]), among others. However, parallelly to these use cases, there has also been research on the potential harms that ChatGPT usage can cause. Such harms include, but are not limited to, gender bias in machine translation (e.g., [9], [30], [31]), propagating harmful stereotypes (e.g., [8], [32], [33]) and propagating mis/disinformation (e.g., [34]–[36]). Researchers in this vein have painstakingly cautioned that users should exercise caution with ChatGPT, acknowledging its strong potential to cause harm and taking extensive steps to mitigate such harms.

Like other sectors, education has also not been immune to ChatGPT, as it has found its way into classrooms at all levels. This usage has brought about a strong debate on whether it should at all be permitted in classrooms, with some educators being of the opinion that ChatGPT brings ethical concerns. One major concern is in the context of academic integrity and plagiarism, where students can ask assignment or homework questions of ChatGPT and copy-paste the output while claiming it as original work (e.g., [37], [38]). ChatGPT usage can thus stunt student learning as it offers up the answers without demanding any intellectual labor, serving as a crutch that can be used across different courses and disciplines [3]. Furthermore, ChatGPT has been known to produce responses that are factually incorrect [39], but such inaccuracy is often missed by students who trust it implicitly. These factors make a strong case for ChatGPT being a potential detriment to student learning, and that it should be avoided.

However, we argue that ChatGPT usage is not without its benefits, and that there is one particular way in which it can be a vitally beneficial tool in the classroom: equity. We believe that ChatGPT can be a tool for providing equitable access to course content for certain students who might need the extra support, and demonstrate this in this paper.

Method

Data

I make my case for ChatGPT being a tool for equitable education in engineering classes based on an interview with an instructor of an engineering course at my University, as well as my own experiences in the same role. I present experiences over five courses, four through self-reflection and one from an interview, adapting an approach from Coppola and Turns [11].

Course C1 was an undergraduate class on Introduction to User Centered Design, a 32-student course for which I was the instructor in Fall 2022. This project-based course walked students through the user centered design process [40] starting from project ideation through user research all the way until prototyping and user testing, and was typically taken by sophomores and juniors having just been admitted into the major. Course C2 was an undergraduate course on Concepts within Human-Computer Interaction (HCI), hereafter referred to as UGCS, a 31-student course for which I was the instructor in Fall 2023. This was a seminar-style

writing-intensive course which covers the breadth of the field of HCI, with students reading 3-4 research papers and writing 500-800 responses every week, over and above a Final Paper and an Annotated Bibliography due at the end of the quarter. This course was typically made up of seniors, and attended even from outside the major.

Course C3 was a project-based class on Accessibility and Inclusive Design, a 37-student class that I was the co-instructor for in Winter 2023. This project-based course encouraged students to adopt participatory design approaches towards designing and testing products for a diverse range of users, and proceeded in a flipped classroom format based on readings and in-class discussions. Course C4 was on Information Visualization, a 36-student class for which I was the Teaching Assistant in Spring 2023. This course covered techniques for working with large datasets and visualizing them, where students worked in a group to create a data visualization project through the user-centered design process [40]. Course C5 was the undergraduate version of the aforementioned course on Information Visualization, a 32-person course taught by interviewee I1 in Fall 2023. It was set up very similarly to C4, with the only difference being that it involved more writing assignments than C4.

Information on the courses is tabulated in Table 1. This approach is similar to Coppola and Turns [11] in the way that this too identifies instances of a phenomenon (student usage of ChatGPT in/for class) across different settings (course structures and goals) and explores the various ways in which the phenomenon played out in an equity sense. Like them, I too recognize that five instances/courses is not enough to make sweeping generalizations, and thus offer this as a proof-of-concept to produce insights for more targeted, deeper studies.

Course	Course Description and Level	Course Type	Instructor
C1	Introduction to User Centered Design (Bachelors)	Project-based	Author
C2	Concepts in HCI (Bachelors)	Seminar-style	Author
C3	Accessibility and Inclusive Design (Masters)	Project-based	Author
C4	Information Visualization (Masters)	Project-based	Author
C5	Information Visualization (Bachelors)	Project-based	I1

Table 1: List of Courses covered in this paper, as well as course descriptions, level, type, and instructor.

Interview/ Reflection Protocol
The findings in this paper are presented through instructor perspectives of ChatGPT usage in their classrooms, all collected at the end of the respective courses. The interview/ reflection protocol is listed below in Figure 1. Interviews were conducted over Zoom, with one interview per course, for 30-45 minutes each.

Part 1: Introduction
1. Briefly describe the course you were an instructor of. Include information about the course level (BS/MS), number of students, type of course, and an overall summary of

course objectives.

Part 2: ChatGPT Policies
2. Did you address your policy of using ChatGPT for this course? What was your policy?
3. How did the students respond to your policy? Was there any conversation or negotiation of ChatGPT usage in your class?

Part 3: Student usage of ChatGPT
4. Briefly describe some common ways in which your students used ChatGPT.
5. Did you have any individual or collective conversations about ChatGPT usage with students, either for breach of policy or some other reasons?
6. Did you suspect any instances of ChatGPT usage being potential grounds for academic dishonesty? If so, how did you address it?

Part 4: ChatGPT as a Tool for Equitable Access to Education
7. Do you consider ChatGPT usage in your classroom as a potential way to provide more equitable access to the class in some cases?
8. In your observed/perceived instances of student usage of ChatGPT, were there moments when such usage provided equity?

Part 5: Conclusion
9. What role do you think instructors have to play in treating ChatGPT as a potential way of granting equitable access to education for certain students?
10. Anything else you would like to share?

Figure 1: Interview/Reflection Protocol

I did not collect, nor do I present in this paper, any artefacts of student usage of ChatGPT in the form of screenshots or direct quotes. This decision is informed by my personal experience that due to the institutional implication, both at my university and others, that ChatGPT usage in classroom contexts can be considered academic dishonesty, that students are not keen on providing recorded evidence of their ChatGPT usage. The findings are driven by informal comments that students made to instructors, through which instructors formed ideas of student usage of ChatGPT in their classrooms. It is therefore important to state that this paper will present opinions of instructors, and not data collected formally from students.

Author Positionality

In the context of this paper, my positionality is that of a senior Ph.D. candidate in an Engineering department at an R1 university. My research is centered around generative AI services built upon large language models, such as ChatGPT, as I explore how the affordances of such tools bring benefit and cause harm, and to whom. Aside from my research, a major component of my Ph.D. is also in teaching and conducting pedagogical research in equity in engineering education. It is also pertinent to mention here that as of this writing, 24% of the students across the undergraduate and graduate levels in my department are international students to the US[1].

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[1] https://www.hcde.washington.edu/about/demographics

Case Studies: ChatGPT Usage Across 5 Courses

Case Study 1: ChatGPT as a Machine Translation Agent

One of the ways in which I observed ChatGPT being used as a tool to provide equitable access to course content was international students' usage of it as a machine translation tool, across all five courses studied here.

This was perhaps the most apparent in C2, a course which focused heavily on long readings and extensive writing on a weekly basis. Several of these readings were research papers or highly technical reports authored in the 20th century, and were written in ways that are different from modern writing styles in American Academic English. In C2, I observed international students using ChatGPT to gain a stronger understanding of the course materials. Students would pick up portions of readings they were having trouble with, and translate them into a different language that they perhaps were more comfortable with. While such translations would almost definitely not be 100% accurate, they were good enough to give students the gist of the material. They also used ChatGPT as a machine translation tool to aid their writing for C2. I observed students often write directly into ChatGPT for short in-class writing exercises, translate them into English, and then adjust the output. Particularly salient to me in this process was the demonstrated dedication of every student to not use ChatGPT outputs verbatim and claim it as their own writing, as they all took steps to avoid committing academic dishonesty.

This usage of ChatGPT by international students as a machine translation tool both for reading comprehension and writing support was also true in other courses. In C3, there was one particular week where both readings for the week were slightly dense, and I saw international students lean on ChatGPT translations. In C4 and C5, two courses on the same topic which uses a set of foundational readings from the 1980s, the same was true. The only course where this did not come up in the interviews being C1, even though the course did have a few dense readings.

Case Study 2: ChatGPT as an Ideation tool

Beyond its utility for machine translation, ChatGPT was also used in the classes covered here as an ideation tool. This was true across both international and domestic students, and various different use cases for each course.

In C1, in the first few weeks after the release of ChatGPT, students began using it as an ideation tool to generate a large volume of potential questions to include in the interview and testing protocols that would accompany their designed prototypes for their respective projects. Although ChatGPT was still in its early days at the time, students still found it to be helpful in providing a baseline set of ideas that they could then build upon, or rule out because of how trivial or inapplicable the ideas would be. A similar usage of ChatGPT was also a feature of C3, which also required interviews at two stages of the class, and also in C4 and C5, albeit to a lesser degree since these courses only require interviews at one stage of the class.

For C1, C3, C4 and C5, students also used ChatGPT to produce a set of blue-sky [41] prototype ideas as potential solutions to the design challenges they were working with, where they generated a large number of small design ideas where most of which were inapplicable or half-baked. As above, students realized that ChatGPT was better at quantity than quality, and that

they could use it as a brainstorming tool to either get bad ideas out of the way or receive an imperfect idea to workshop and improve upon.

In particular, it is salient to mention the experiences of two student groups, in C3 and C4 respectively. In C3, I suggested that they use ChatGPT as a tool for generating blue-sky ideas, and evaluate the effectiveness or feasibility of such ideas for their use case. This was a productive exercise, as it allowed the group to identify a few ideas which they could use as a baseline and improve upon, resulting in the group agreeing upon a set of design propositions to pursue. Another group had a similar experience in C4, where they could not determine what type of data visualization they could use for their specific dataset and used ChatGPT to generate a long list of ideas from which they could pick viable ones to build upon.

Case Study 3: ChatGPT as a Writing Assistant

Finally, the 3rd way in which students, both international and domestic to the US, used ChatGPT is as a writing assistant tool. This was most salient in C2, a course heavily focused on writing and reading, which had a weekly writing load of 500-800 words and an end-of-quarter final paper of 2500-3000 words. In this vein, students would use ChatGPT to support their weekly writing tasks by generating a few discussion questions or some key points around the readings for the week, which they would then use as a springboard for their own content. In some cases, students also used ChatGPT to put together outlines for their final papers, providing a topic idea and receiving suggestions on potential arguments they could consider or how they can transition between ideas. Though usage of ChatGPT was the most salient in C2, it was also seen in C1 and C3 when students were required to draft a final report alongside their designs.

I highlight a specific instance of two students in C2, both of whom were struggling with crafting their respective final papers for the class. They worked with me to ideate on a few approaches they could practice, but ultimately had trouble forming outlines to pace their papers out. In one of our office hour sessions, I suggested that they ask ChatGPT for a potential outline, given the ideas they had and some points they wanted to focus on. They were mostly satisfied with ChatGPT's generated outlines, though they both decided to finetune them on their own.

ChatGPT as a Tool for Equitable Access

Based on the aforementioned case studies, I believe that I successfully presented evidence of ChatGPT being leveraged by students to gain more equitable access to courses. All of these case studies contained evidence of instructors observing how students used ChatGPT to improve their individual learning and course experiences. Although this is true mostly for international students, I also gathered evidence of domestic students using ChatGPT to gain stronger access to course materials and succeed in classes. I draw upon Lalueza et al.'s [42] framework of educational activities constructing microcultures, and thus condense the case studies into two microcultures of ChatGPT usage in the classroom, one for international students and one for domestic students, with some overlap between the two.

The microculture of ChatGPT usage for domestic students is created through the usage as an ideation tool (Case Study 2) and as a writing assistant (Case Study 3). In such cases, students used ChatGPT as a supportive tool in order to augment their own working processes. ChatGPT

became useful as an ideation tool in C1 for students who perhaps were having difficulties coming up with initial ideas for their design process, which was understandable given how students entered C1 with varying levels of prior experience in design and the UCD process. In such instances, working with an ideation tool to generate blue sky ideas and build upon some or rule out others [43] augmented the learning experience and paved the way for them to come up with the design ideas they would initially use. For students who might not have had much experience with the UCD process prior to C1, ChatGPT served as a tool for providing them equitable access such that they could keep up with their more experienced peers and not fall behind the class.

Additionally, ChatGPT was used as a writing assistant by students, especially in C2, who possibly were struggling with the heavy writing load that the course provided. Such a writing load is uncommon within the courses in our department, most of which are engineering courses with larger emphasis on hands-on work and designing/building, and culminating in some sort of project-based deliverable instead of a final essay. While some students, by virtue of their other majors/minors or personal proficiencies, adapted well to the writing loads, most did not. In such circumstances, ChatGPT being used as a writing assistant provided them equitable access to pathways of success in the course, as they used ChatGPT for tasks such as ideating potential structures for their final essays.

The microculture of ChatGPT usage for international students was primarily constructed through their usage of ChatGPT as a machine translation tool (Case Study 1). This was especially true for students whose primary languages are not English, as they used ChatGPT as a machine translation tool to gain equitable access to the course material. For such students, ChatGPT provided incredible opportunities to access course material by allowing them to translate readings into English. Particularly salient instances of this phenomenon occurred in C2, where a lot of the readings were from the mid to late 90s, and written in a type of English difficult to understand and potentially inaccessible to even English-speaking students.

Furthermore, the microculture of ChatGPT usage for international students also encompassed that of domestic students, as international students also used ChatGPT for the same cases (ideation tool from Case Study 2 and writing assistant from Case Study 3). While domestic students used ChatGPT perhaps mostly in cases where they did not have the same prior experience or the knowledge necessary for success as their peers, international students used it to primarily navigate the disadvantage of the mode of instruction being in English. I argue that an absence of ChatGPT would either have detracted from these experiences or led international students to consider alternative means of gaining access to course materials or acquiring the proficiency necessary to succeed in courses.

Of all of these, perhaps the most interesting is international students' usage of ChatGPT as a machine translation tool, especially given that there is already a well-established free and easy-to-use machine translation tool that is popular within such populations: Google Translate. I theorize this to be the case because while Google Translate might be the established tool for machine translation, students preferred ChatGPT in the aforementioned cases because it presented a one-stop shop for all of their purposes, boasting of features that products in the Google suite do not have. Students were also able to easily perform translations back-and-forth between English and other languages using the conversational nature of ChatGPT, whereas doing

so on Google Translate would involve more work such as selecting languages from dropdown menus and copy-pasting text to translate. Finally, ChatGPT's ability to provide alternative responses (using the 'Regenerate' button) could also have been useful, especially given how Google Translate typically does not provide multiple translation options for long chunks of text (anything more than 3-4 words). Therefore, it is important to recognize that while ChatGPT and Google Translate can essentially perform the same function of machine translation, students used ChatGPT instead of the commonly-established Google Translate possibly due to ChatGPT being better suited for their purposes.

It is also important to highlight how, across the five courses, students took extra caution to avoid conducting academic dishonesty or plagiarizing from ChatGPT. Though instructors could not state for a fact that all submissions received across all courses were 100% student authored and did not include any ChatGPT content, it was evident how seriously students took this to be. While this can possibly be attributed to general student integrity or the fears of being caught committing acts of academic dishonesty, I believe that another contributing factor was how instructors across all five courses openly addressed ChatGPT usage. Both instructors openly addressed how they believed that explicitly banning ChatGPT would not only be a bad idea because of the good it can be used for, but also such a ban would not be effective since students could avert it with little to no avenues of being caught. Rather, instructors leaned into ChatGPT usage by providing, at various points during the courses, examples of how students could use ChatGPT to overcome an emergent barrier or improve their approach. I believe that such an openness to ChatGPT usage created a shared understanding and trust between students and their instructors, as students held themselves accountable on their personal usage of ChatGPT.

Design Recommendations

In this section, I highlight a few design recommendations that instructors can adopt towards using ChatGPT to make their classrooms more inclusive.

Discuss ChatGPT Usage, and Co-Create Usage Norms

In all five courses, instructors addressed their policies for ChatGPT usage in their classrooms. Never was ChatGPT usage explicitly banned, and the only indication of unfair usage was a directive to not pass off ChatGPT-authored content as their own under any circumstances. Instructors leaned into the fact that ChatGPT usage will be inevitable simply because of how easy-to-use it was and the lucrative possibilities it could bring to students.

In this vein, I believe that instructors should consider having conversations with their students on the first day of class about ChatGPT usage policies in the course. Such a conversation should begin with the instructor explicitly stating that ChatGPT is not banned in the classroom, because I believe that such a ban is infeasible and impossible to enforce, and might only drive students to adopt clandestine methods to use ChatGPT [44]. Instructors should instead consider laying out some prohibited instances of usage such as plagiarism, and inviting an opportunity for the class to co-design norms around ChatGPT usage in class. Such a co-creation of group norms fosters stronger accountability within students and generates higher buy-in since it subverts the power dynamics of the instructor imposing norms to be followed [45].

Address ChatGPT Limitations, and seek Expert Support

While permitting the usage of ChatGPT in their classrooms, instructors must also be mindful of the fact that there are some very well-known limitations to ChatGPT, not least of which is the fact that it embeds and perpetuates negative stereotypes against traditionally marginalized groups (e.g., [8], [46], [47]). ChatGPT is also known to be imperfect as a machine translation tool [9], and can produce incorrect responses to questions ([27], [48]).

Instructors should therefore address these limitations of ChatGPT usage in their classrooms, and dispel any misconceptions of it being a silver bullet [49] that can be used to overcome any challenges within the course. Having said that, I also recognize that not every instructor will be an expert on the limitations of ChatGPT usage, or fully aware of all the ways such usage can go wrong. Therefore, I encourage instructors to seek support in this vein, calling on researchers and experts in the field to equip them with the tools to have this conversation with students, or lead the conversations themselves. This is also where departments and institutions can support individual instructors in finding and getting in touch with such experts.

Incorporate ChatGPT into Teaching Practice

Beyond talking about ChatGPT usage and discussing norms and limitations on the first day of class, instructors can also model such usage by incorporating ChatGPT into their own teaching practices. I personally found success in demonstrating ChatGPT's ability to list potential affordances to be incorporated into student design projects in C1 and C3, showing how ChatGPT can be used for blue-sky ideation. Similarly, I1 mentioned using ChatGPT to list potential visualization options given a description of a dataset, which allowed students to weigh which ones might be more appropriate for their own circumstances.

In this vein, we advocate for stronger use of ChatGPT by instructors in their teaching practice. Instructors can consider live-sharing their screens and interacting with ChatGPT, asking questions and evaluating the quality of the response. Similarly, they can use ChatGPT to generate prompts for reading discussions or essay assignments, obtaining baseline information that they can refine, in similar ways as described in Case Studies 2 and 3.

I propose these design recommendations as a start, and encourage instructors to try these out in their course designs while adapting them as appropriate.

Limitations and Future Work

A limitation of this study is that it captures instructors' opinions of student usage of ChatGPT in their classrooms based on their experience observing students, and therefore might not be entirely representative of student opinions. While the underlying intention was to not make students uncomfortable by asking them about their ChatGPT usage in the classroom from my positionality as their former instructor and the power differential that created, I recognize how directly sourcing student comments could have made the findings of this study stronger.

A future extension of this work can cover a larger breadth of courses, across multiple disciplines and instructors. I also intend to follow up on this work by integrating ChatGPT into my teaching practice in the aforementioned ways, and examine its impact on courses.

Conclusion

In this paper, I make a case for student usage of ChatGPT in engineering courses as a tool for providing equitable access to education, based on instructor perspectives of such usage across five engineering courses. Though ChatGPT usage might present challenges such as academic dishonesty and students have to be careful with the ways in which ChatGPT embeds biases and stereotypes, I outline design recommendations that instructors can pursue to guide students towards using ChatGPT to arrive at a more level footing to other classmates.

At the end of the day, ChatGPT is a tool that has the potential to both do good and cause harm. It is up to instructors to educate and support students in leveraging it for the good it can bring, and avoid causing harms that it can perpetuate. Considering ChatGPT as a technology to be leveraged in classrooms the same way a lot of other such technology is, we can better support potentially disadvantaged students and curate a stronger learning experience.

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