Academic Dishonesty With AI: Questions and Answers

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Introduction

This paper addresses frequently asked questions regarding my speech over "Academic Dishonesty by Artifical Intelligence." These are questions regarding ethics, logistics, and other solutions to the problem statement.

What are ways to protect student privacy for the AI detection solution?

AI models in general have always been a concern of a lot of people because of the access to personal data. AI detection software has also had this concern since it employs AI itself. However, there are laws that protect privacy. Specifically, these AI detection software are under the use of the instructor using it in which the Family Education Rights and Privacy Act (FERPA) laws protect student privacy. For example, this can be seen from Turnitin's privacy policy which states that Turnitin's software is subject to the customer (educational instructor) with respect to FERPA laws (Turnitin, n.d). Along with that, Turnitin's data centers and cloud platforms are in compliance with ISO's (International Organization for Standardization) information security management systems standards. To explain the significance of ISO, as seen from an Investopedia article, ISO works in 167 countries and only produces standards for products, materials, and processes under technology (Kenton, 2024). This means Turnitin's data is very secure. For extra security, Turnitin only accesses student data when it is necessary for the product (AI detection and plagiarism software). All this information can be seen on their privacy policy.

What about curating assignments specifically so that AI could not help solve?

There are ways to prevent cheating by making the nature of the assignment harder to cheat on. Though this is a valid solution that I did not cover in my speech, this is broad enough to be categorized under "increased surveillance of students." That is because this solution requires significantly more work and time for graders similar to increasing surveillance of students.

Along with that, this method requires making more personal assignments for students to curb cheating with AI. An example of a "personal assignment" could be requiring students to make a presentation, or discussion assignments which displays a student's critical thinking (Northern Illinois University, n.d.). Assignments that cannot be automatically graded by software are also a counter to academic dishonesty in general. Again, this means more time spent for grading because of less automation. Not only is a lot of time being taken up, but to curate these types of assignments may also be more work/preparation for instructors. All in all, this solution is not the best because of its inefficiency for the graders.

What about expenses regarding the AI detection software?

Software employed by universities can be very expensive purely because of the size of the student body. As seen from the Linkedin article cited, Turnitin costs around $3 per student on average annually according to universities (Hofer, 2024). The cost comes from the energy drawn to support the AI models used by Turnitin and the databases needed to store data. To use the example of Texas A&M University, where there are around 70,000 students currently enrolled, that is around $210,000 in fees for AI and plagiarism software. However, that is also assuming that Turnitin AI will apply to every student. For example, an engineering student will have Turnitin's AI detector applied to their work because of the use of Gradescope (which belongs under Turnitin) for engineering math and sciences. On the other hand, majors that aren't as tech focused may not have Turnitin employed because of more "personal assignments" described earlier. Though the fees are not cheap, it is still a great tool to automate grading thousands of students smoothly and efficiently. Along with that, AI models are becoming better at mimicking human behavior and universities may need AI detection software to keep up with the changes.

How is an AI detector different from a plagiarism detector?

AI detectors and plagiarism detectors are similar in that they both draw from a large database. However, both the tools differ in its algorithms. An AI detector employs artificial intelligence models itself to detect parts of a submission that are allegedly AI generated. This is what makes AI detection software highly accurate, using AI to detect AI. Richards et al. (2023) states that plagiarism detectors "link a student submission to a pre-existing piece of text" (p.5). In other words, plagiarism detection software does not draw conclusions the way an AI model would but is rather a very complex search algorithm. An AI detector will use machine learning and LLMs (Large Language Models) to "decide" if a submission was AI generated. Both the plagiarism and detection software still display a statistic of how much of a student's submission was not their own work. This allows for instructors to flexibility decide benchmarks and standards for grading. In all, plagiarism detectors search a database for a matching submission while an AI detector will use machine learning and decision making to evaluate a submission.

What are the methodologies regarding the academic dishonesty studies cited in the speech?

In general, there is no numerical way to measure cheating unless by monitoring students (which would render the experiment inaccurate). However, researchers can measure the number of correct answers relative to other trials of the experiment and record the difference. This was shown in Bertoni et al's 2021 study where fifth graders were monitored one year and their correct answers recorded as a percentage (p.2). Another study done by Zhao et al. (2023) was to design an exam that a student can only get the right answer to by cheating (p.4). Specifically, cheating by referring to a solution sheet posted by their professor. In this study, students were left to take a five question exam where the questions were curated from another experiment where students voted on the top five hardest questions. On exam day, the students were left alone to

take the exam with instruction not to look at the solution sheet until after finishing. From that, the rate of correct answers was recorded by how many questions students got right, and in other words, cheated on. In experiment terms, the rate of correct answers was the dependent variable and the anti-cheating conditions were the independent variables.

Conclusion

In conclusion, this paper addresses five different frequently asked questions regarding my Academic Dishonesty by Artificial Intelligence speech. The questions ranged from ethics to other solutions not mentioned in the speech.

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