Executive Summary

Goal: Evaluate the effectiveness of gamifying the TAIGA platform to enhance user engagement and educational interaction.

Methodology: User testing sessions were conducted with college students aged 18-22 in a controlled environment to assess engagement through gamified elements in the TAIGA platform.

Participants: College students familiar with General AI tools but new to TAIGA.

Findings:

- **Successes**: Gamification showed potential in capturing user interest and sustaining long-term engagement.
- **Challenges**: Confusion over reward mechanisms and superficial engagement with the educational content were observed.

Recommendations:

- Reduce Over-Gamification
- Purposeful Gamification

Next Steps:

- Focus on Educational Challenges
- Optimize Gamification Interface
- Enable Voting on Challenge Effectiveness

Test & Prototype

Who

We tested our prototype on primarily college students ranging from ages 18-22 who were familiar with GenAI tools, but had never used WeAudit TAIGA before.

What

Our prototype and tests were designed to gain insight into whether the gamification of TAIGA would incentivize users to use TAIGA more and be more engaged with the platform

Where

We utilized breakout rooms in the Tepper building to conduct sessions with our testers. This was to ensure the environment was quiet, clean, and free of disturbances.

Why

We used our prototype and tests to see whether there would be increased engagement of users if the platform is gamified. We wanted to see if these results would impact the potential addition of new features that could benefit TAIGA

How

We conducted research sessions with user testers to see if they responded to any of the incentives we added to engage with the platform more and in more meaningful way. We gave instructions and observed the testers using the prototype

Successes and Failures

Success:
-   Users shows initial engagement by attempting the daily challenges, which indicated the gamification strategy has a potential of captivating and retaining user.
-   There was a notable curiosity about the leveling up system and the rewards, which implies that the reward system can potentially drive further engagement.
-   Users are motivated to use the platform on a daily basis, which shows that the gamification is effective in maintaining users' long-term engagement with the platform.

Failure:
-   There was confusion regarding the reward mechanisms and distribution, and some users were not incentivized by the rewards offered.
-   While users wanted to engage with the platform to meet challenges, this did not necessarily translate into meaningful engagement with the content itself, and sometimes distract users from the educational use of TAIGA.

Outlined Proposed Changes

Less Gamification
Our study showed that although the gamification of TAIGA certainly led to users engaging more with the platform, we also believe it took away slightly from the educational aspect of the platform. Users were less inclined to learn about GenAI bias or took longer to take an interest in GenAI bias since they were too distracted with the rewards system and challenges.

More Purposeful Gamification
Our study showed that not only did the amount of gamification make a difference, the type of gamification did too. Gamifications that included challenges which were loosely related to user interaction and education had poorer feedback and led to lower levels of user interaction. On the other hand, gamification that included challenges which encouraged user interaction and helped users learn more about AI bias led to higher levels of user interaction and better feedback.

Next Steps

We would implement proposed changes to our hi-fi prototype and also look to conduct more rigorous testing on our updated gamification idea.

- **Curated Daily Challenges.** In light of the proposed change of reducing the amount of gamification, we are planning on revising our current prototype to showcase more educational-focused challenges instead of just challenges for the sake of gamification. This would stay true to the platform's central theme of education and awareness.
- **Alter Gamification Interface.** We understand that gamification may not be for everyone. While certain users might appreciate the aspect of gamification, others might not. We also acknowledge the fact that too much gamification could take away the aspect of learning and education. Hence, we aim to edit the gamification interface so that it does not overpower the other elements on the page and does not take away the central theme of the AI bias platform. Users who are looking for elements of gamification should be able to find it easily while users who do not wish to participate should not find it hard to ignore the aspect of gamification.
- **Voting on Challenges.** We realise that having a general set of challenges might not be suitable for everyone. To create a platform that is inclusive and understanding of the different groups of people using the platform, we are planning on adding a feature that lets you vote on whether a particular challenge was a good challenge or a bad challenge. In the long run, this helps us come up with a more curated and engaging set of challenges that users would want to revisit.

Appendix - Consent Form

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Consent Form for Participation in Research

Study Title: WeAudit TAIGA Usability Testing

Contact Information: Yousif Alnajjar
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Purpose of this Study
This study is part of a course in the Carnegie-Mellon University, Human-Computer Interaction program. Students need to learn about your experience as part of their course project. The purpose of the study is to understand how users interact with a generative AI auditing platform to report and discuss biases in algorithms.

Summary
This research offers an opportunity to explore the intersection between generative AI and human experience through WeAudit TAIGA platform. Participants will engage with the WeAudit TAIGA platform, not only to identify and discuss biases in AI algorithms but also to complete daily challenges that encourage platform interaction.

Procedures
We've designed a series of procedures to assess the user experience thoroughly. Participants will be engaged in tasks that simulate typical user interactions with our platform, including navigating the interface, generating images to explore AI bias, creating and posting threads using these images, and reviewing their own and others' threads. This approach is intended to highlight the platform's usability, identify any navigational issues, and gauge the overall user engagement and comprehension.

We plan to capture audio during the sessions to facilitate a more detailed analysis post-study. These recordings will only be accessible to myself and my three team members, ensuring privacy and confidentiality. We are committed to respecting the privacy of our participants; thus, if you are uncomfortable with being recorded, we will opt for note-taking as an alternative method to gather insights.

The expected duration of each participant's involvement is tailored to ensure a comprehensive yet efficient assessment, estimated to total around 15-20 minutes, allowing for seamless task transitions and any necessary discussions. This setup will be conducted remotely via Zoom with screen sharing enabled, removing the need for travel and allowing participants to join from any location at their convenience. This method not only facilitates broader participation but also reflects our commitment to adapting our research methodologies to suit participant needs while ensuring the highest standards of data collection and analysis.

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Participant Requirements
Participants should have basic proficiency in English to understand the tasks and provide feedback. Participants should have relevant expertise about genAI (eg: used genAI before, have adequate knowledge about what genAI is). Additionally, participants should be willing to engage in discussions about biases in genAI, and provide honest feedback during the study.

Risks
The risks and discomfort associated with participation in this study are no greater than those ordinarily encountered in daily life or during routine online activities, such as browsing websites or using social media platforms. However, participants should be aware that discussing or identifying biases in AI algorithms may involve engagement with sensitive topics. Measures will be taken to ensure a respectful and safe environment for all discussions and interactions.

Compensation & Costs
There is no compensation for participation in this study.
There will be no cost to you if you participate in this study.

Future Use of Information
In the future, once we have removed all identifiable information from your data (information or bio-specimens), we may use the data for our future research studies, or we may distribute the data to other investigators for their research studies. We would do this without getting additional informed consent from you (or your legally authorized representative). Sharing of data with other researchers will only be done in such a manner that you will not be identified.

Confidentiality
By participating in the study, you understand and agree that Carnegie Mellon University may be required to disclose your consent form, data and other personally identifiable information as required by law, regulation, subpoena or court order. Otherwise, your confidentiality will be maintained in the following manner:

Your data and consent form will be kept separate. Your research data will be stored in a secure location on Carnegie Mellon University property. By participating, you understand and agree that the data and information gathered during this study may be used by Carnegie Mellon University and published and/or disclosed by Carnegie Mellon University to others outside of Carnegie Mellon University. However, your name, address, contact information and other direct personal identifiers will not be mentioned in any such publication or dissemination of the research data and/or results by Carnegie Mellon University.

Researchers will also take the following steps to protect participant's identities during the study:
(1) Each participant will be assigned a number.
(2) Your profile will be built based on the number and not by your name.
(3) Any information about your profile will be kept strictly confidential and not published.
(4) We will respect any requests from participants to keep any additional information private.

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(5) The only information that we collect about the participants is information we obtain during the course of the interview via questions or observations.
(6) Information will be stored in a remote folder secured by 2FA and only accessible by the researchers that conducted the survey.
(7) We will only publish general data, not data that is specific from a particular participant or interview.
(8) No video or audio recordings will be taken during the interview.

Rights
Your participation is voluntary. You are free to stop your participation at any point. Refusal to participate or withdrawal of your consent or discontinued participation in the study will not result in any penalty or loss of benefits or rights to which you might otherwise be entitled. The researcher may at his/her discretion remove you from the study for any of a number of reasons. In such an event, you will not suffer any penalty or loss of benefits or rights which you might otherwise be entitled.

Right to Ask Questions & Contact Information
If you have any questions about this study, you should feel free to ask them now. If you have questions later, desire additional information, or wish to withdraw your participation please contact the researcher by mail, phone or e-mail in accordance with the contact information listed on the first page of this consent.

Voluntary Consent

For competent Adults:

By signing below, you agree that the above information has been explained to you and all your current questions have been answered. You are encouraged to ask questions about any aspect of this research study during the course of the study and in the future. By signing this form, you agree to participate in this research study. A copy of the consent form will be given to you.

Yuvan Das
PRINT PARTICIPANT'S NAME

Yuvan Das
PARTICIPANT SIGNATURE   DATE 4/20/2024

I certify that I have explained the nature and purpose of this research study to the above individual and I have discussed the potential benefits and possible risks of participation in the study. Any questions the individual has about this study have been answered and any future questions will be answered as they arise.
Esther Lin
SIGNATURE OF PERSON OBTAINING CONSENT   DATE 4/20/2024

Appendix - Synthesis

Positives
Kester Tan

Negatives & Improvements
Kester Tan

Gamification improved engagement	Gamification was easy to understand	Gamification was motivating
Kester Tan	Kester Tan	Kester Tan

Gamification improved engagement — Kester Tan

Gamification was easy to understand — Kester Tan

Gamification was motivating — Kester Tan

Users are willing to complete the challenges if it's easy to achieve
Sylvia Ho

Users all attempted the daily challenges!
Esther Lie

User expressed interest in gamification and pointed out other possible challenges like posting comments and number of sharings
Sylvia Ho

Gamification fostered user's interest in interacting on the platform.
Sylvia Ho

Users recognized the leveling up logic and are incentivized to complete the challenges
Sylvia Ho

Users found that the daily challenges were fun and motivating
Kester Tan

Users are curious about the rewards from completing challenges
Sylvia Ho

Users liked the feeling of completing a challenge
Yousif

Confusing Interface — Kester Tan

Gamification is distracting — Kester Tan

Gamification is not motivating — Kester Tan

Suggestions — Kester Tan

Users were confused where the rewards went to
Esther Lie

Users wanted to be engaged with to get the challenge but didn't actively engage with other posts
Kester Tan

Users found that some challenges were too difficult and there was no way to change it
Kester Tan

Users said a leaderboard would motivate them to pursue more challenges
Yousif

Users found it troublesome to track progress of challenges while in another tab
Kester Tan

Gamification distracted users from the actual usage of TAIGA
Esther Lie

Users weren't incentivized by the rewards
Esther Lie

Users want a bonus for completing subsequent challenges
Kester Tan

Users paid more attention to the challenges and incentives than the content of the posts
Sylvia Ho

Users thought the daily challenges were too difficult
Esther Lie

Users want a leader board for daily challenge completion and points
Kester Tan

Users increased engagement but wasn't always meaningful
Yousif

Users didn't understand what they gain from completing challenges
Yousif

Users were somewhat distracted from the main idea of identifying bias
Yousif

Users did not find a good way to spend the rewards obtained from completing daily challenges
Kester Tan

Users want more ways to get rewarded than just 3 challenges a day
Yousif