Impact of Level of Algorithmic Transparency on User Trust and Engagement of Simulated Social Media Feeds

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In recent years, artificial intelligence has been thoroughly integrated into different social media algorithms, changing the way different content is recommended to users. This study aimed to address this change through designing and applying nine different simulated social media feeds using GitHub through the combination of JavaScript, HTML, and CSS. Through these simulated feeds, the level of algorithmic transparency in social media recommender systems were tested to see their impact on user trust and engagement. The simulated feeds emulated TikTok, Instagram Reels, and YouTube Shorts all with opaque, partial, and full levels of transparency. A sample size of 22 participants interacted with each feed, as their engagement data was logged through measuring likes, skips, and retention, collected through a spreadsheet connected to the GitHub Repository via Google Apps Script, gathering quantitative data. After interacting with the different social media feeds, the participants completed surveys through Google Forms regarding their understanding of the levels of transparency and satisfaction with their experience, gathering mainly qualitative data. By creating an engagement score using a self-made equation measuring likes, favorites, and watch time, partially transparent feeds w had an overall engagement score of 47.9, opaque feeds had a score of 43.5 and fully transparent feeds had a score of 42.2. Responses from the post experiment Google Form survey showed partially transparent feeds provided enough information for users to understand how the algorithm worked without being completely overwhelmed. This study hoped to provide can provide useful information and guidelines in building new features to different social media platforms.

Awards Won:
Association for the Advancement of Artificial Intelligence: AAAI Student Memberships for each finalist that is part of the 1st, 2nd, and 3rd Prize Winning projects and 5 Honorable Mention winning projects (up to 3 students per project) (in-kind award / part of the 1st-3rd prize)