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Ethics-aware Recommender Systems for Social Media

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Recommender Systems (RS) are software agents that match users to items that might be of interest to a user. For example, Netflix matches viewers to content, Spotify matches listeners to songs, and Amazon matches buyers to products. Traditionally, RS is developed to optimize commercial objectives such as profitability. Therefore, news-based RS optimizes reading behavior, online retail-based RS optimize sponsored products, and social media-based RS optimizes user gaze. Maximizing profit is a short-term goal, and often competing objectives such as long-term loyalty, ethics, etc., are overlooked. Ethics of various purposes have broader implications for society's overall well-being, ignoring which can lead to distrust and discrimination. Ethics in RS is defined as any recommendation that negatively impacts or violates the rights of its stakeholders (Milano et al. 2020). Many companies have actively volunteered to contribute to the societal good via their platform. For example, Facebook has invested \$7.5 million in opening an institute for ethics. Nevertheless, companies have come under scrutiny for unethical practices, such as privacy breaches, opacity, etc.

Ethics in technology and social media are a rising concern for the information systems and computer science researchers. Modifying existing social media recommender algorithms is also a way to implement ethics (Dube 2021). Ethics should be measured and implemented from the start. But instead, it is brought up as a reactionary measure after implementing the algorithm. Social media sites have been at the receiving end for making unethical recommendations. For example, YouTube was criticized for its recommender algorithm pushing conspiracy theory videos to increase ad revenue. The company only changed the algorithm retroactively to not recommend those videos as much after receiving pushback (Dube 2021). This study aims to build an ethics-aware RS that combines competing objectives of profitability and ethics in the context of social media. This study is crucial and comes at an opportune time as ethics in RS is required to have systemic effects on today's society, which is grappling with issues of income disparity, racial injustice, etc., worsened by the crisis caused by the pandemic

References

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