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Dark Side of GenAI: A Blackbox Analysis of X

TREO Talk Paper

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Abstract

Recent advancements in generative artificial intelligence (GenAI) have raised many fears, risks, and concerns (Kim 2023; Okey et al. 2023). To shed light on the dark side of GenAI, we collected 55,916 posts from X (formerly Twitter). Based on the content of these posts, we manually labeled a sample set with the corresponding dark side, then identified a short, comprehensive list of GenAI dark sides. Using this list, we trained the ReadMe classifier, a supervised learning algorithm on Brandwatch (“Crimson Hexagon and Brandwatch” 2020), to classify the remaining posts. Further analysis, including emotion analysis and analysis of professions and interests yielded several insights. We found that most posts have a negative sentiment with a total count of 20,777 (89.9%) posts. The emotion analysis showed that majority of the users expressed anger with 15,688 posts (43.4%), followed by fear (7,307 posts, 20.2%), sadness (5,790 posts, 16%), joy (4,255 posts, 11.8%), disgust (2,896 posts, 8%), and surprise (252 posts, 0.7%). Regarding professions, the top four groups expressing concerns about the dark side of GenAI, were the executives group (2,703, 30%), followed by the artists group (1,305, 14%) and software developers and the IT group (1,151, 13%), then the teachers and lecturers group (1,019, 11%). Similarly, based on interest, the top four groups expressing concerns about the dark side of GenAI, were the technology group (4,446 posts, 18%), followed by those interested in business (3,605 posts, 15%), those who are interested in books (2,831 posts, 11%), and those who are mainly interested in family and parenting (1,892 posts, 8%). Regarding the identified dark sides of GenAI, overall, we identified seven dark sides. Most posts discussed concerns about misinformation and digital deception (18,745 posts, 53%), followed by degradation in quality (8,981 posts, 25%), plagiarism (2,004 posts, 6%), job losses due to automation (1,618 posts, 5%), security and privacy concerns (1,516 posts, 4%), bias (1,454 posts, 4%), ethical concerns (7,92 posts, 4%), and legal and defamation issues (455 posts, 1%). This research not only reported the different types of dark sides discussed on X but also ranked the most discussed topics according to the volume of posts, interests, and professions.

REFERENCES

- “Crimson Hexagon and Brandwatch.” 2020. *Brandwatch*. (<https://www.brandwatch.com/p/crimson-hexagon/>, accessed July 4, 2020).
- Kim, P. W. 2023. “A Framework to Overcome the Dark Side of Generative Artificial Intelligence (GAI) Like ChatGPT in Social Media and Education,” *IEEE Transactions on Computational Social Systems*, pp. 1–9. (<https://doi.org/10.1109/TCSS.2023.3315237>).
- Okey, O. D., Udo, E. U., Rosa, R. L., Rodriguez, D. Z., and Kleinschmidt, J. H. 2023. “Investigating ChatGPT and Cybersecurity: A Perspective on Topic Modeling and Sentiment Analysis,” *Computers & Security* (135), p. 103476. (<https://doi.org/10.1016/j.cose.2023.103476>).