

A Blockchain Enhanced Framework for Social Networking: Open Review

Authors: Renita M. Murimi[†]

Reviewer: Reviewer A

Abstract. The final version of the paper “A Blockchain Enhanced Framework for Social Networking” can be found in Ledger Vol. 4, S1 (2019) 67-81, DOI 10.5915/LEDGER.2019.178. There was one reviewer involved in the review process, who has not requested to waive their anonymity at present, and is thus listed as Reviewer A. After initial review (1A), the author submitted a revised submission and response (1B) after which the editors determined that the author had adequately addressed the reviewer concerns, completing the peer-review process. Authors’ responses are in bullet form.

1A. Review

Reviewer A:

The authors propose a framework for the blockchain-enhanced version (BEV) of social networking sites. This is a very well written paper and it clearly outlines the potential but also the limitation of the blockchain technology for enhancing the privacy in social networks. The proposed framework taps into many aspects relevant for achieving these goals and is well described. The related work is properly cited. I would suggest that the authors add some description (a few sentences saying how AI / machine learning algorithms can help to advance some of the steps.

1B. Authors’ Response

Reviewer A:

The authors propose a framework for the blockchain-enhanced version (BEV) of social networking sites. This is a very well written paper and it clearly outlines the potential but also the limitation of the blockchain technology for enhancing the privacy in social networks. The proposed framework taps into many aspects relevant for achieving these goals and is well

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- I have taken the reviewer’s suggestion to incorporate the role of AI/machine learning algorithms in the sequence of steps that are taken to create blockchain-enhanced social networks. Below, I highlight specific instances:
 - Page 7: In the description for Level 3 of Fig. 4, I have added two sentences on the role of AI/ML algorithms in learning sharing preferences and diversify network feeds. To support this argument, I have included a reference to a related work.
 - Leskovec, J., Huttenlocher, D., & Kleinberg, J. “Signed Networks in Social Media.” Proceedings of the SIGCHI Conference on Human Factors in Computing Systems 1361-1370 2010.
 - Page 7: In the description for Level 4 of Fig. 4, I have added three sentences on how AI/ML can be used for tuning reward algorithms and mitigating the impact of homophily.
 - General comments on the addition of AI/ML algorithms: I have incorporated the revised commentary on the role of AI/ML algorithms in Level 3 (Reward algorithms) and Level 4 (Reward archive) of the BEV-SNS framework. The first two levels (Level 1: Raw data archive, Level 2: Shared data archive) are currently envisioned as records of SNS transactions, and therefore AI/ML can be employed in the subsequent levels (Levels 3 and 4) to infer and suggest user preferences and rewards.
- Other changes in the manuscript:
 - In keeping with the manuscript submission guidelines in Ledger for the length of the Introduction, I have split the scope of the original introduction to focus on (a) the aim of the paper and (b) the motivation for this paper. The aim of this paper is now covered in Section 1 (Introduction) and the motivation is now covered in Section 2 of the paper (Digital Identity, Ownership and Monetization).



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