DecentPeeR: A Self-Incentivised Inclusive Decentralized Peer Review System

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Current Peer-Review Systems

Let us submit our paper to ICBC'24.

DecentPeeR: A Self-Incentivised & Inclusive Decentralized Peer Review System

Let me review the paper properly.

Being lucky with the reviewer

Submitting the review

No on noticed that I spent so much time and effort.

Luckily, no one noticed.

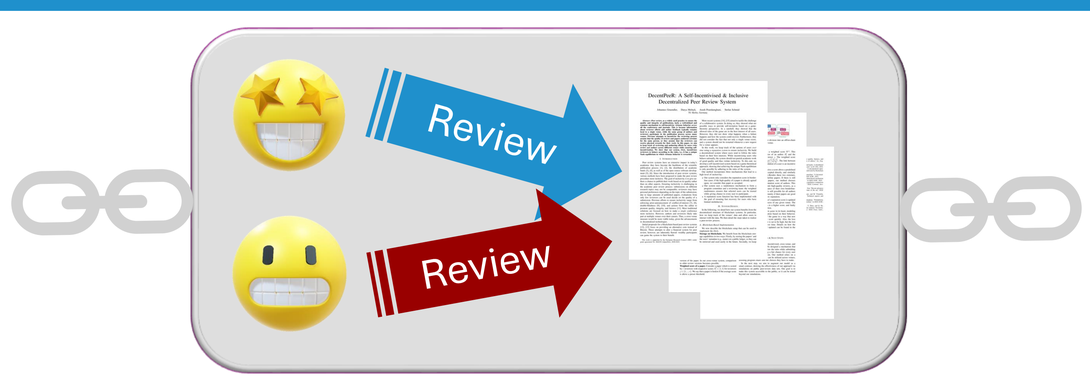
Being unlucky with the reviewer

Submitting the review

I have no time, let me just rehash what I had before.

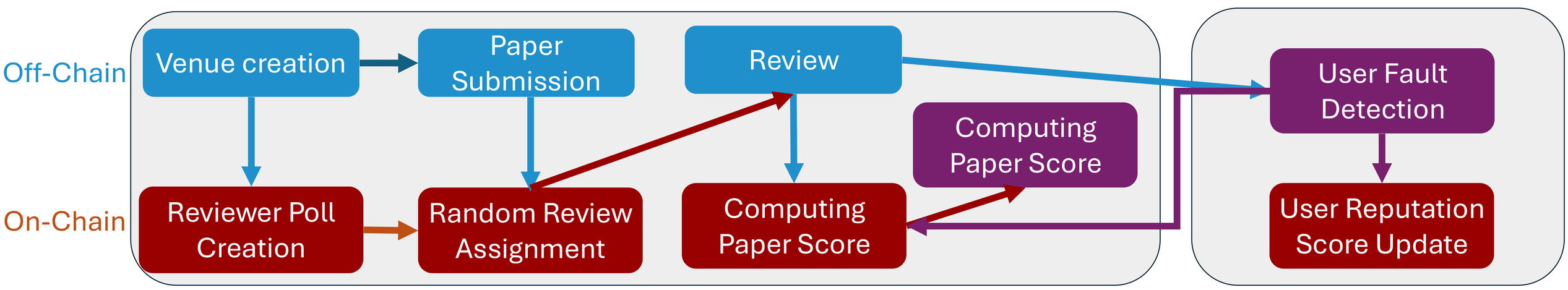
Our Method

Gamified reputation system, based on behavior of authors and



Keeping track of reviews on blockchain, allowing cross-venue comparisons.

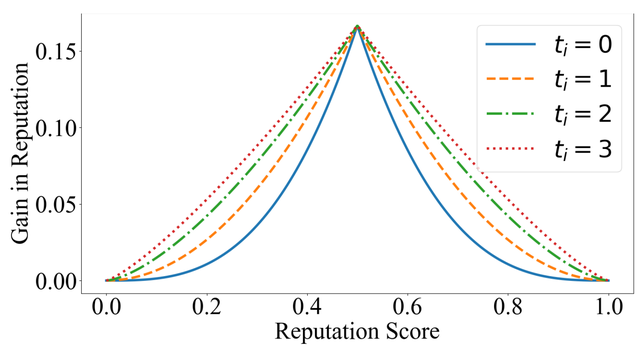
Structure



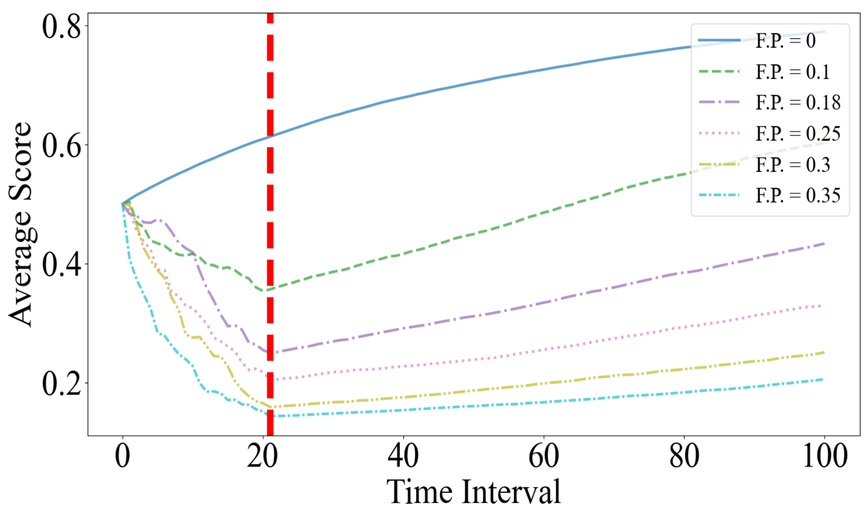
Our Analysis

Change in Reputation score:

$$R_{new} \approx R_{old} \pm g(R_{old}, t_i)$$



You would be able to recover your reputation faster, if you are in early stages of your career.



Simulated reputation change over time, considering different fault probability (F.P.), showing inclusivity of our system.

References: A. Avyukt, G. S. Ramachandran, and B. Krishnamachari, "A decentralized review system for data marketplaces," in IEEE ICBC, 2021, J. X. Lim, B. Monnot, and G. Piliouras, "Blockchain-based mechanism design for collaborative mathematical research," in IEEE ICBC, 2022