Assignment on Computational Model of Trust and Reputation

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Changes according to Feedbacks

Feedback 1: Lack of Recency Effect

The model proposed did not account for the recency effect and instead exhibited a stronger primacy effect.

Before the change:

Reputation for event "i" is -

$$Reputation_i = \frac{\sum_{j=1}^{i}(weighted\ payoff_{a,j})}{\sum_{j=1}^{i}(weighted\ payoff_{a,j} + weighted\ payoff_{b,j})}$$

After the change (without summations):

Reputation for event "i" is -

$$Reputation_i = \frac{weighted\ payoff_{a,i}}{(weighted\ payoff_{a,i} + weighted\ payoff_{b,i})}$$

By making this adjustment, the traditional definition of reputation, which typically considers cumulative past payoff interactions, is altered. Instead, reputation now solely relies on the payoff interaction of the current event for which reputation and trust are being evaluated. This modification effectively addresses the summation effect, thereby reducing the impact of recency and emphasizing the significance of immediate interactions in determining reputation and trust.

Feedback 2: Dominance of Primacy Effect

The exponential memory decay function's decay constant was heightened to counterbalance the dominance of the primacy effect.