

Nomination Letter

The research paper titled "Designing effective masking strategies for cyberdefense through human experimentation and cognitive models" authored by Palvi Aggarwal et al. presents an innovative approach to cyber defense strategies by incorporating human experimentation and cognitive models. The study addresses the challenge of determining the effectiveness of masking strategies in practice against human attackers, which is often not considered in traditional game theory and machine learning defense algorithms.

The paper presents two masking strategies of defense, risk averse and rational, generated using game theory and machine learning algorithms. Through an experiment with human attackers, the study compares the effectiveness of these two masking strategies. The results indicate that the risk averse strategy can reduce defense losses compared to the rational masking strategy.

Moreover, the paper proposes a cognitive model based on Instance-Based Learning Theory that accurately represents and predicts the attacker's decisions in this task. The model can inform game theoretic defense algorithms and produce synthetic data that can be used by machine learning algorithms to generate new defense strategies.

Overall, this research paper makes a significant contribution to the field of cyber defense by incorporating human factors and cognitive models to design effective masking strategies. The paper's findings and proposed model can inform the development of new defense strategies that can better protect against human attackers. Therefore, I strongly recommend this paper for consideration for recognition in relevant academic and industry communities.

Thank you!

Best Regards,

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