Artefact Peer Review Discussion

Response 2

Re: Artefact presentation
by Zihaad Khan - Saturday, 18 November 2023, 7:23 AM

Hi Jonathan,

Great presentation, and an excellent visual representation of the database design. Out of curiosity, which database did you use and why?

Secondly, how do your findings align with or differ from existing literature on cybersecurity awareness and education in secondary schools?

Regards
Zihaad

Hi Zihaad, thank you for your comments and questions. In development, I used a local MySQL database; however, before deployment, I researched a solution that could be cost-effective and build trust from users of the application if it was ever queried. To efficiently manage the production of the application and my needs, I decided to use a third-party cloud provider, Digital Ocean, for the database and hosting. The solution offered data integrity with backup and recovery mechanisms, and their reputation has suggested continuous access and scalability under heavy load (Digital Ocean, 2023). As the cloud database offers availability maintenance with security updates, after vetting other providers, I felt this was the best solution for my needs. As my sample was relatively small, which was unforeseen, perhaps the solution might not been that necessary; however, for this project, it supported my needs, providing peace of mind and a convenient platform for use.

For the findings and existing literature, there were limited studies conducted on phishing with secondary school students, mainly due to the ethical issues of conducting simulations involving deception. This does make comparisons difficult;

however, it is also exciting as the research could be the beginning of future work, particularly in Hong Kong, where the research is limited. Nonetheless, there is existing literature on cybersecurity awareness in secondary schools that can be considered. Nicholson et al. (2021) suggested that teaching methods and curriculums lack opportunities for students to apply knowledge, which supported using a phishing simulation to apply knowledge in a safe but realistic environment, as Sağlam et al. (2023) indicated. Further findings indicated that students who initially considered themselves to have a higher self-efficacy in cyberawareness overestimated their knowledge and misjudged accuracy in phishing identification, which aligns with Diaz et al. (2020). Therefore, many findings did align with previous studies on cybersecurity awareness; however, age provided a weak inverse relationship, suggesting younger students had greater awareness that did not conform to trends from existing studies. This could suggest that educational curriculums are becoming more relevant, and students gain knowledge informally via peers or media.

Diaz, A., Sherman, A. T. & Joshi, A. (2020). Phishing in an academic community: A study of user susceptibility and behavior. *Cryptologia,* 44, (1): 53-67.

Digital Ocean. (2023). Certification reports. Available from: https://www.digitalocean.com/trust/certification-reports [Accessed 10 June 2023].

Nicholson, J., Terry, J., Beckett, H. & Kumar, P. (2021). *Understanding Young People's Experiences of Cybersecurity*. *Proceedings of the 2021 European Symposium on Usable Security.* Karlsruhe, Germany: Association for Computing Machinery.

Sağlam, R. B., Miller, V. & Franqueira, V. N. L. (2023). A Systematic Literature Review on Cyber Security Education for Children. *IEEE Transactions on Education*, 1-13.