A CLOSER LOOK

Fundamental research in cybersecurity has led to innovative and interdisciplinary advances. However, a disconnect exists in transferring fundamental cybersecurity research into implementable industry solutions. An organization looking to improve its cybersecurity defenses may be overwhelmed by where to start; organizations who lack cyber expertise may shy away from implementing metrics altogether.

This research promotes implementing metrics and best practices by formulating a value model to help organizations choose what to implement to increase their cyber defense. These practices may differ by organization, based on demographics and history such as size of firm and prior experiences of cyber attacks and breaches. This research creates a framework that can be applied to any organization, customized by data applicable to that firm.

Motivation for this research is the Five Hard Problems, a research area supported by the Science of Security initiative at the National Security Agency. Students who worked on this project have visited NSA and interfaced with the Technical Director and members of the Science of Security team. Our preliminary work led to an article in the Baltimore Business Review, sponsored by the College of Business and Economics.

SERVICES/SOLUTIONS/OUTCOMES

• Student-led article published in Baltimore Business Review
• Creation of a value model framework
• Student research opportunities
• Framework that companies can follow to make better cybersecurity choices

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