Security and Privacy Challenges for Healthcare: Minitrack Overview

Ace Vo, PhD
Loyola Marymount University
ace.vo@lmu.edu

Abstract

This year, the minitrack has grown from the traditional patient-centric view into a more multi-faceted phenomenon. These three accepted research in the Security and Privacy Challenges for Healthcare minitrack is a testament of how the minitrack continues to be the place for acknowledging, addressing, and asserting the importance of security and privacy in healthcare.

1. Introduction

This year, the minitrack has grown from the traditional patient-centric view into a more multi-faceted phenomenon. These three accepted research in the Security and Privacy Challenges for Healthcare minitrack is a testament of how the minitrack continues to be the place for acknowledging, addressing, and asserting the importance of security and privacy in healthcare.

While we are anticipating going back to Hawaii this year, perhaps next year will be the time we can meet in person in Hawaii. This year, we received five submissions. We accepted three for publication. In our minitrack this year, we present three studies: "Classifying Cyber-Risky Clinical Notes by Employing Natural Language Processing" by Schmeelk, Dogo, Patra, and Peng, "Using Design Science Research to Develop a Secure Social Platform for Complementary and Alternative Medicine" by Plachkinova and Faddoul, and "The Double-Edged Sword of Health Data Breaches: A Comparison of Customer and Stock Price Perspectives on the Impact of Data Breaches of Response Strategies" by Masuch, Greve, and Trang.

2. Classifying Cyber-Risky Clinical Notes by Employing Natural Language Processing

Sharing clinical notes are important for the advancement of care for individual and medicine in general. However, when the medical notes contain pertinent and personal information, sharing these notes infringes upon patients' privacy protection. In this research, the authors provided a way to classify security risks in clinical notes using Natural Language Processing algorithms. The results are encouraging, paving the way for further research in differentiation in risks at different regulatory requirements.

3. Using Design Science Research to Develop a Secure Social Platform for Complementary and Alternative Medicine

Rooted in the Design Science Research paradigm, this article provides an instantiation of a platform that are dedicated to Complimentary and Alternative Medicine (CAM). Here, security/ privacy concerns and challenges are in the making of the platform, trying to ensure that the risks are minimized. The article discusses the implications of data exposure and how it could perpetuate undesirable circumstances for the users.

4. The Double-Edged Sword of Health Data Breaches: A Comparison of Customer and Stock Price Perspectives on the Impact of Data Breaches of Response Strategies

In the last article of this year minitrack, the authors examine how data breach events and their response strategies affect the valuation of a company, specifically in the stock valuation. The article shows that having a breach, and choosing the correct response strategy, could attenuate the decrease in valuation. Compensation, as shown, is one of the sound strategies amidst a data breach incident. The paper later provides both implications for research and practice.

URI: https://hdl.handle.net/10125/79840
978-0-9981331-5-7

5. Conclusion

As we are progressing toward understanding more on how security and privacy affects the healthcare industry at the personal level (patients, caregivers, physicians, nurses, etc) and organizational level (hospitals, insurers, etc), we realize that there is no one-sided approach to explore the phenomena. We hope to receive more research that pertain to the minitrack theme in the future.