

Healthcare Information Management in Cybernetics

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Introduction

Management of smart services is a difficult and critical task, especially in light of the current unprecedented increase in the number of cyber-attacks. Several studies have found that digital healthcare services are major targets of these cyber intrusions and have been severely impacted. As a result, management and security of smart healthcare facilities that rely on digital infrastructure have become critical. In a world where cybercrime is on the rise, security and healthcare experts must collaborate to develop more productive and effective mechanisms to strengthen smart services. The healthcare industry must redefine its digital transactions and infrastructure from a fresh perspective. Several experts and researchers iterate on current techniques and methodologies that adhere to universally accepted standards such as the Health Insurance Portability and Accountability Act (HIPPA), and these techniques are perfectly updated and secure for digital and smart healthcare infrastructure.

Description

The picture painted by the cyber-attack census report, on the other hand, is concerning, particularly in the context of healthcare exploitation incidents [1-3]. The figures clearly demonstrate that the policies described in these standards are insufficient for security and failure management. Furthermore, the current state of the pandemic that has erupted all over the world has exposed the flaws that exist and are emerging in smart healthcare services. Digital healthcare services have been found to be insufficient in emergency and mass cases. Managing a major health disaster with impenetrable security is a difficult and demanding task for healthcare organisations. Thus, the current state of uncertainty has motivated the authors to work on redefining the healthcare infrastructure by identifying potential flaws in the existing healthcare infrastructure.

Furthermore, conceptualising these vulnerability points reveals that the main difficulty in managing healthcare infrastructure is "variety." As a concept, variety refers to various states of the same thing. This can be illustrated with the example of a smart room heater. If a heater was set to manage a maximum temperature of 5°C and the temperature suddenly dropped below 5°C, the heater would not function properly because it had not been configured to function in temperatures below 5°C. This example demonstrates clearly that variety is always an issue in any type of system because every system

has limitations, but the applications of the systems are diverse in nature. A conceptualized ideology can only be validated if it is shown to be effective. Only a thorough discussion and analysis can persuade the industry of the model's potential. The authors have provided the research community with a new perspective on cybernetics ideology [4,5].

Conclusion

In this context, it is also critical to emphasise the significance and potential of the proposed ideology for the improvement of the healthcare sector. Thus, the authors discussed the significance of the proposed ideology for mapping the design process for healthcare to make this task a little easier and more specific. Choosing an approach and an idea for the intended research work is a major task. It becomes even more critical when the research topic is in a highly sensitive domain, such as healthcare, and is in the process of being redefined. That is why the authors chose an ideology of thought rather than a specific approach or technique. For redefining healthcare data management infrastructure, the authors chose cybernetics ideology. The data production layer addresses the origin of healthcare data. In layman's terms, a data production layer generates or produces data through various types of attributes such as personal relation counters, where new patients come and discuss their previous and current medical histories in order to obtain the necessary medical assistance.

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