

Big Data Security in the Medical Industry Compared to E-commerce

Introduction

Big data plays a crucial role across industries, but security requirements vary significantly depending on the type and sensitivity of the data. Among the industries discussed by Gupta (2018), the medical industry has the highest privacy concerns, while the e-commerce industry focuses on secure data processing and financial risk prevention. Comparing these two industries highlights the contrasting priorities and challenges in managing big data security.

Security Issues in the Medical Industry

The medical industry handles highly sensitive and private patient data. Security concerns primarily revolve around ensuring data privacy, reliable storage, and disaster recovery mechanisms. System failures or breaches can directly impact hospital operations and patient care, making secure and reliable data storage critical (Gupta, 2018). Additionally, patients are often unwilling to share medical data, limiting research opportunities. Hence, privacy protection outweighs other security requirements, emphasizing strict data backup, confidentiality, and access control mechanisms.

Security Issues in the E-commerce Industry

In contrast, the e-commerce industry focuses on network security, data integrity, and access control to prevent fraud and financial risks. E-commerce systems require high-speed data processing, redundant backups, and strong fault tolerance due to large-scale transactions.

Expansion of business chains and reliance on cloud computing introduce risks of data misuse and breaches, requiring strict internal control and algorithmic security (Gupta, 2018).

Comparison

While both industries require robust storage and backup, their priorities differ. The medical industry prioritizes confidentiality and patient trust, whereas e-commerce emphasizes financial security and transaction integrity. Both sectors benefit from big data security technologies but must adopt tailored approaches based on their risk profiles.

Conclusion

The medical and e-commerce industries face distinct big data security challenges shaped by their operational nature. Protecting sensitive medical data demands stringent privacy measures, while e-commerce requires robust financial and transactional security to maintain consumer trust and prevent financial fraud.

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References

Gupta, N. K. (2018). *Addressing big data security issues and challenges*. International Journal of Computer Engineering & Technology, 9(4), 229–237.