Enhancing Steganography Through Deep Learning Approaches

Part of the Advances in Information Security, Privacy, and Ethics Book Series

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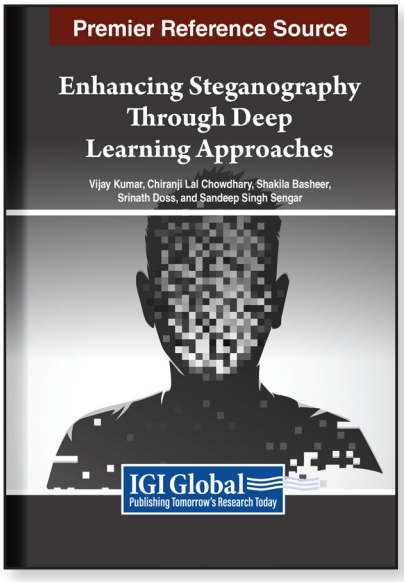

Description:

In an era defined by digital connectivity, securing sensitive information against cyber threats is a pressing concern. As digital transmission systems advance, so do the methods of intrusion and data theft. Traditional security measures often need to catch up in safeguarding against sophisticated cyber-attacks. This book presents a timely solution by integrating steganography, the ancient art of concealing information, with cutting-edge deep learning techniques. By blending these two technologies, the book offers a comprehensive approach to fortifying the security of digital communication channels.

Enhancing Steganography Through Deep Learning Approaches addresses critical issues in national information security, business and personal privacy, property security, counterterrorism, and internet security. It thoroughly explores steganography's application in bolstering security across various domains. Readers will gain insights into the fusion of deep learning and steganography for advanced encryption and data protection, along with innovative steganographic techniques for securing physical and intellectual property. The book also delves into real-world examples of thwarting malicious activities using deep learning-enhanced steganography.

This book is tailored for academics and researchers in Artificial Intelligence, postgraduate students seeking in-depth knowledge in AI and deep learning, smart computing practitioners, data analysis professionals, and security sector professionals. It is a valuable resource for those looking to incorporate advanced security measures into their products and services. With a focus on practical insights and real-world applications, this book is an essential guide for understanding and implementing steganography and deep learning techniques to enhance security in digital transmission systems.

ISBN: 9798369322239 **Pages:** 300 **Copyright:** 2024 **Release Date:** July, 2024

Hardcover: $295.00 **E-Book:** $295.00 **Hardcover + E-Book:** $355.00

Topics Covered:

- Adversarial Training for Steganography
- Benchmarking and Evaluation Metrics for Deep Learning-based Steganography
- Combining Traditional Steganography with Deep Learning
- Deep Learning for Payload Compression and Efficiency
- Deep Learning for Steganalysis Resistance
- Deep Learning-Based Embedding Techniques
- Deep Reinforcement Learning for Steganography
- Generative Adversarial Networks (GANs)
- Improving Security with GANs
- Multimodal Steganography using Deep Learning
- Privacy-Preserving Applications using Deep Learning Steganography

Subject: Security & Forensics

Classification: Edited Reference

Readership Level: Advanced-Academic Level (Research Recommended)

Research Suitable for: Advanced Undergraduate Students; Graduate Students; Researchers; Academicians; Professionals; Practitioners

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