

VILNIAUS UNIVERSITETAS
MATEMATIKOS IR INFORMATIKOS FAKULTETAS
PROGRAMŲ SISTEMŲ STUDIJŲ PROGRAMA

GAN architektūrų, tinkamų kenkėjiško kodo obfuskacijai, analizė

Analysis of GAN architectures suitable for Ethical Malware Obfuscation

Kursinis darbas

Atliko: 4 kurso 3 grupės studentas

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- `notes/2.md` - Notes about [ZCY⁺24]
- `notes/3.md` - Notes about [ZHZ⁺22]
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- `notes/5.md` - Notes about [HT17]
- `notes/6.md` - Notes about [FWL⁺19]
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- `notes/8.md` - Notes about [AKF⁺18]

Introduction

The introduction describes the aim of the work, the relevance of the topic, and the expected results. The introduction should not be a summary of the content. The length of the introduction should be 1-2 pages.

Results

The results and conclusions section must clearly present the main results of the work (something analyzed, something created, something implemented) and provide conclusions (comparisons of methods for solving the examined problems, recommendations, and highlights of innovations).

Conclusions

1. The conclusions section compares the methods for solving the examined problems, offers recommendations, and highlights innovations.
2. Conclusions are presented in a numbered (possibly hierarchical) list format.
3. The conclusions of the work must correspond to the aim of the work.

Šaltiniai

- [AKF⁺18] H. S. Anderson, A. Kharkar, B. Filar, D. Evans, P. Roth. *Learning to Evade Static PE Machine Learning Malware Models via Reinforcement Learning*. 2018-01-30. [žiūrėta 2024-09-30]. Prieiga per internetą: <https://doi.org/10.48550/arXiv.1801.08917>.
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- [HT17] W. Hu, Y. Tan. *Generating Adversarial Malware Examples for Black-Box Attacks Based on GAN*. 2017-02-20. [žiūrėta 2024-09-18]. Prieiga per internetą: <http://arxiv.org/abs/1702.05983>.
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- [ZCY⁺24] F. Zhong, X. Cheng, D. Yu, B. Gong, S. Song, J. Yu. MalFox: Camouflaged Adversarial Malware Example Generation Based on Conv-GANs Against Black-Box Detectors. *IEEE Transactions on Computers*. 2024, tomas 73, numeris 4, p. 980–993 [žiūrėta 2024-09-15]. ISSN 1557-9956. Prieiga per internetą: <https://doi.org/10.1109/TC.2023.3236901>.
- [ZHZ⁺22] F. Zhong, P. Hu, G. Zhang, H. Li, X. Cheng. Reinforcement Learning Based Adversarial Malware Example Generation against Black-Box Detectors. *Computers & Security*. 2022, tomas 121, p. 102869 [žiūrėta 2024-09-14]. ISSN 0167-4048. Prieiga per internetą: <https://doi.org/10.1016/j.cose.2022.102869>.

- [ZZY⁺22] E. Zhu, J. Zhang, J. Yan, K. Chen, C. Gao. N-Gram MalGAN: Evading Machine Learning Detection via Feature n-Gram. *Digital Communications and Networks*. 2022, tomas 8, numeris 4, p. 485–491 [žiūrēta 2024-09-23]. ISSN 2352-8648. Prieiga per internetą: <https://doi.org/10.1016/j.dcan.2021.11.007>.