# XIAOYUN XU PHD STUDENT

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**EDUCATION** 

### **Radboud University**

Nijmegen, The Netherlands

2022 - 2025

PhD in Computer ScienceAdvisor: Dr. S. Picek

• Promotor: Prof. Dr. L. Batina

• Research area: Adversarial Machine Learning

#### University of Bristol

Bristol, UK

MSc in Advanced Computing

2017 - 2018

• Thesis: Investigating the effectiveness of existing machine-learning-based compiler optimization techniques

UESTC Chengdu, China

BEng in Software Engineering

2013 - 2017

• Thesis: Vehicle license plate recognition based on SVM and ANN

#### **PUBLICATIONS**

- 1. Xiaoyun Xu, Zhuoran Liu, Stefanos Koffas, and Stjepan Picek. Towards Backdoor Stealthiness in Model Parameter Space. ACM Conference on Computer and Communications Security (ACM CCS 2025 Cycle A), Accepted, 2025.
- 2. Xiaoyun Xu, Zhuoran Liu, Stefanos Koffas, Shujian Yu, and Stjepan Picek. BAN: Detecting Backdoors Activated by Adversarial Neuron Noise. *Advances in Neural Information Processing Systems (NeurIPS)*, 2024.
- 3. Xiaoyun Xu, Shujian Yu, Zhuoran Liu, and Stjepan Picek. MIMIR: Masked Image Modeling for Mutual Information-based Adversarial Robustness. *Under review*, 2025.
- 4. Zhuoran Liu, Senna van Hoek, Péter Horváth, Dirk Lauret, Xiaoyun Xu, and Lejla Batina. Real-world Edge Neural Network Implementations Leak Private Interactions Through Physical Side Channel. arXiv preprint, 2025.
- 5. Xiaoyun Xu, Oguzhan Ersoy, Behrad Tajalli, and Stjepan Picek. Universal Soldier: Using universal adversarial perturbations for detecting backdoor attacks. *IEEE/IFIP International Conference on Dependable Systems and Networks Workshops (DSN-W)*, 2024.
- 6. Xiaoyun Xu, and Stjepan Picek. Poster: Boosting Adversarial Robustness by Adversarial Pre-training. ACM Conference on Computer and Communications Security (CCS), 2023.
- 7. Xiaoyun Xu, Guilherme Perin, and Stjepan Picek. IB-RAR: Information Bottleneck as Regularizer for Adversarial Robustness. *IEEE/IFIP International Conference on Dependable Systems and Networks Workshops (DSN-W)*, 2023.
- 8. Xiaoyun Xu, Jingzheng Wu, Mutian Yang, Tianyue Luo, Qianru Meng, Weiheng Li, and Yanjun Wu. AI-CTO: Knowledge graph for automated and dependable software stack solution. *Journal of Intelligent and Fuzzy Systems*, 2021.
- 9. Xiaoyun Xu, Jingzheng Wu, Mutian Yang, Tianyue Luo, Xu Duan, Weiheng Li, Yanjun Wu, and Bin Wu. Information leakage by model weights on federated learning. *In Proceedings of the 2020 workshop on privacy-preserving machine learning in practice*, CCS workshop PPLMP, 2020.

#### EXPERIENCE

#### Institute of Software, Chinese Academy of Sciences

2018.10 - 2020.10

- Position: Research Assistant
- Research Topics: Knowledge Graph, security vulnerabilities, Interpretable AI.
- Developing domain knowledge graph of software vulnerabilities.

Campus Experience Summer School, Šibenik, Croatia

2022.06

• On real-world crypto and privacy

Exchange program at Christopher Newport University, America 2015.07 – 2015.08

- Received 10,000-yuan (Chinese yuan) scholarship
- Explored the American education model and culture

## Exchange program at Waseda University, Japan

2016.01 - 2016.02

• Received a scholarship of 50,000-yen (JPY)

• Learned more about Japanese culture and a visit to Japanese well-known enterprises

SKILLS Langua

Languages: Chinese, English.

Programming: C/C++, Python, Linux, HTML, Git, CSS, Makefile, NodeJS, JavaScript,

Neo4j, Cypher.

Courses: Computational Neuroscience, Cloud Computing, Computer Graphics, Data Structures and Algorithms, Database Principles and Applications, Computer Network, Im-

age Processing, Computer Vision, etc.

ACADEMIC

Reviewers: BMVC, ICLR, NeurIPS, SaTML

SERVICES External Reviewers:

External Reviewers: S&P, NDSS, USENIX Security