Georgios Syros

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Education

Northeastern University, Boston, MA, United States — Fall 2023 - Present
Ph.D. in Computer Science, **GPA: 4.0**
Advisors: *Prof. Alina Oprea*, *Prof. Cristina Nita-Rotaru*

Athens University of Economics and Business, Athens, Greece — 2019 - 2023
B.Sc. in Computer Science, **GPA: 9.35/10**

Research Experience

Cybersecurity & Privacy Institute, Northeastern University, Boston — 2023 - Present
Graduate Research Assistant
Research in security for systems that employ machine learning.

Maryland Cybersecurity Center, University of Maryland, College Park — 2022
Undergraduate Research Assistant
Research Internship in security for machine learning in database management systems.

Mobile Multimedia Lab, Athens University of Economics and Business — 2021 - 2023
Undergraduate Research Assistant
Research on distributed ledger technologies and decentralized storage networks.

Publications

SAGA: A Security Architecture for Governing AI Agentic Systems, NDSS, 2026
Georgios Syros, Anshuman Suri, Jacob Ginesin, Cristina Nita-Rotaru, Alina Oprea,
A secure architectural framework to control communication and capabilities of AI agents.

DROP: Poison Dilution via Knowledge Distillation for Federated Learning, preprint, 2025
Georgios Syros*, Anshuman Suri*, Farinaz Koushanfar, Cristina Nita-Rotaru, Alina Oprea,
A defense that mitigates backdoor attacks in FL by distilling clean knowledge from poisoned models.

Backdoor Attacks in Peer-to-Peer Federated Learning, ACM Transactions on Privacy and Security (TOPS), 2024
Georgios Syros*, Gokberk Yar*, Simona Boboila, Cristina Nita-Rotaru, Alina Oprea,
Analyzes and demonstrates novel backdoor attacks in decentralized federated learning settings.

Decentralized NFT-based Evolvable Games, 4th Conference on Blockchain Research and Applications for Innovative Networks and Services (BRAINS), 2022
Christos Karapapas, **Georgios Syros**, Iakovos Pittaras, George C. Polyzos,
Proposes a blockchain-based framework designed to support artist sustainability in digital games, enabling the use of NFTs as dynamic, evolvable assets that respond to player actions.

Talks

From Autonomy to Accountability: Securing Agentic AI Systems with SAGA
@ *Khoury Security Day '25*, May 2025
DROP: Poison Dilution via Knowledge Distillation for Federated Learning
@ *New England Systems Day '25*, Feb 2025

Teaching Experience

Fundamentals of Cloud Computing, Northeastern University 2025
· Assisting students with their projects and grading assignments.

Awards and Honors

· Financial Scholarship for Academic Excellence, *Huawei Hellas Enterprise*
· Honor for High Academic Performance, *Athens University of Economics and Business*
· Selected for Greek delegation, *Huawei Seeds for the Future 2021*

Reviewer Duties

· ACM Transactions on Privacy and Security (TOPS)
· ACM Conference on Computer and Communications Security (CCS)

Software

· CookMate: developing an enhanced microwave interface with accessibility features [PDF] [GitHub]
· Strabo.io; a real time NLP-backed Greeklish-to-Greek translation keyboard for Android [GitHub]
· VζOOM; developing a fast, lightweight video calling web app using WebRTC [GitHub]
· Simplegram; A simple Pub/Sub distributed messenger app [GitHub[1]] [GitHub[2]]

Technical Skills

Programming: Python, C, C++, Java, PostgreSQL
Machine Learning: TensorFlow, PyTorch, Adversarial ML, Federated Learning
Security: Network monitoring (Wireshark), Cryptographic protocols
Tools: Docker, Git, LaTeX