

## Billy Tsouvalas

Research Assistant & PhD Student at SUNY Stony Brook  
Electrical & Computer Engineer BSc, MSc  
IBM Certified Cybersecurity Analyst  
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## Education

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Stony Brook University (SBU)	2022-Present
Computer Science PhD	
Virginia Commonwealth University (VCU)	2021-2022
Computer Science Graduate Studies	
University of Patras	2014-2020
BSc, MSc from Electrical and Computer Engineering Department	
Master's Thesis: Malware Classification Methodologies	

## Work Experience

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SBU Research Assistant	2023-Present
Web Security Research	
SBU PragSec Lab System Administrator	2023-Present
Network & Server Administrator	
SBU Teaching Assistant	2022-2023
Web Security Research	
TA for Computer Networks course	
VCU Research Assistant	2021-2022
Network Intrusion Detection and Prevention Systems	
Critical Infrastructure Cybersecurity: Energy Sector (Solar, Wind)	
VCU Cybersecurity Center Social Media Administrator	2021-2022
Social Media Marketing and Digital Presence	
University of Patras Research Intern	2019-2020
Static and Dynamic Malware Analysis and Detection	
Online Misinformation Propagation	
Website Development and Maintenance	2018-2020
Web Design/Development	
Web Applications	
Social Media and Digital Marketing	

## Research

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SBU PragSec Lab	2022-Present
Web Security	
Honeypots, Bot Behavior, Deception-based Defenses	
VCU Modern Heuristics Research Group	2021-2022
Network Security and Cyber Threat Analysis and Characterization	
Critical Infrastructure Cybersecurity	
University of Patras Malware Analysis Team	2019-2020
Development of Static and Dynamic Malware Detection Tool	

## Publications

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	2023
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Surgical teaching of the retropubic midurethral sling: a virtual reality training system	
Lauren Siff, <i>Vasileios Tsouvalas</i> , Lewis F Bost, Milos Manic	
International Urogynecology Journal <b>AWARD: Best Video Presentation at AUGS/IUGA 2022</b>	

	2022
Location and Language Independent Fake Rumor Detection through Epidemiological and Structural Graph Analysis of Social Connections <i>Dimitrios Serpanos, Georgios Xenos, <b>Billy Tsouvalas</b></i> Frontiers in Artificial Intelligence	
	2021
Data-driven correlation of cyber and physical anomalies for holistic system health monitoring <i>Daniel L Marino, Chathurika S Wickramasinghe, <b>Billy Tsouvalas</b>, Craig Rieger, Milos Manic</i> IEEE Access	
	2020
Malware classification methodologies. <a href="#">(link)</a> <b>B. Tsouvalas</b> University of Patras, Greece MSc Thesis	

## Academic Service

Publicity Chair	2022, 2023
Active Defense & Deception Workshop under IEEE Euro Security and Privacy Conference	
Reviewer for IEEE Transactions on Industrial Informatics	2022

## Certifications & Courses

Google Cybersecurity Professional Certificate Course duration: 6 months	Obtained: Aug. 2023
Palo Alto Networks Cybersecurity Prof. Cert. Course duration: 1 month	Obtained: June 2023
CISCO Network Automation Engineering Fundamentals Specialization Course duration: 3 months	Obtained: June 2023
(ISC) <sup>2</sup> Certified in Cybersecurity Specialization (CC) Course duration: 1 month	Obtained: June 2023
INFOSEC JavaScript Security Specialization Course duration: 1 month	Obtained: June 2023
EC-Council Cybersecurity Attack and Defense Fundamentals Course duration: 5 months	Obtained: June 2023
Google IT Automation w/ Python Prof. Cert. Course duration: 8 months	Obtained: Oct. 2021
INFOSEC Cyber Incident Response Specialization Course duration: 4 months	Obtained: Aug. 2021
IBM Cybersecurity Analyst Prof. Cert Course duration: 8 months	Obtained: Dec. 2020
Homeland Security and Cybersecurity Specialization University of Colorado, Colorado Springs Course duration: 4 months	Obtained: Dec. 2020
Usable Security University of Maryland, College Park	Obtained: Nov. 2020
Generative Adversarial Networks (GANs) DeepLearning.AI	Obtained: Nov. 2020

## Professional Skills

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### Network & Systems

Nginx, Apache, Mitmproxy, Docker, Hydra, Wpscan, Honeypot Deployment, Bot Behavior Analysis

### Network Security

IDS/IPS, Wireshark, Zeek, Suricata, Snort, Stratosphere IPS, Anomaly Detection, Intrusion Detection Datasets

### Penetration Testing and Forensics

OWASP, Burp Suite, Metasploit, NMAP, Hashcat, Aircrack-ng, Volatility

### Malware Analysis

NSA Ghidra, Hex Rays IDA Pro, Radare, gdb, Malware Reverse Engineering, Control Flow & API Call Graphs

### Machine Learning and Data Mining

Binary Decision Trees, Random Forest, SVM, Neural Networks, Markov Chains, BERT

### Programming and Scripting

Python, C, C++, DSP Assembly, Java, Javascript, Git, Matlab

## Languages

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English<sup>a</sup> ● ● ● ● ●

French<sup>b</sup> ● ● ● ● ●

Greek (Native) ● ● ● ● ●

German ● ● ● ● ●

ETS TOEFL Nov. 2020, Score: 115/120  
DALF C1 CERF

## Soft Skills

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Fast Learner

Responsible

Performance Under Pressure

Team Work

Multitasking

Stamina

Verbal Communication

Public Speaking

## Misc

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Military Service Obligations Fulfilled  
Hellenic Navy

2018-2019