

# Billy Tsouvalas

Research Assistant & PhD Student at VCU  
Electrical Engineer BSc, MSc  
IBM Certified Cybersecurity Analyst

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## Education

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Virginia Commonwealth University (VCU) 2021-Present

Engineering PhD with a concentration in Computer Science

University of Patras 2014-2020

BSc, MSc from Electrical and Computer Engineering Department

Thesis: Malware Classification Methodologies

Full Thesis available at:

<https://nemertes.library.upatras.gr/jspui/bitstream/10889/14031/1/TsouvalasMalwareClassificationMethodologiesOct2020.pdf>

## Research

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VCU Modern Heuristics Research Group 2021-Present

Network Security and Cyber Threat Analysis and Characterization

Critical Infrastructure Cybersecurity

AI-Deep Learning Adversarial Examples Attacks

University of Patras Malware Analysis Team 2019-2020

Development of Static and Dynamic Malware Detection Tool

Participation in Cybersecurity Exercise Panoptes 2020

(Hellenic National Defence General Staff)

Participation in HackTheBox CTFs

## Certifications & Courses

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IBM Cybersecurity Analyst Professional Certificate	Obtained: Dec. 2020
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Course duration: 8 months

Homeland Security and Cybersecurity Specialization	Obtained: Dec. 2020
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University of Colorado, Colorado Springs

Course duration: 4 months

Cyber Incident Response Specialization	Obtained: Aug. 2021
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INFOSEC

Course duration: 4 months

Usable Security	Obtained: Nov. 2020
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University of Maryland, College Park

Palo Alto Networks Academy Cybersecurity Foundation	Obtained: Nov. 2020
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Palo Alto Networks

Generative Adversarial Networks (GANs)	Obtained: Nov. 2020
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DeepLearning.AI

## Work Experience

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Cybersecurity Research	2018-Present
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Static and Dynamic Malware Analysis and Detection

Network Intrusion Detection and Prevention Systems

Critical Infrastructure Cybersecurity: Energy Sector (Solar, Wind)

Website Development and Maintenance	2018-2020
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Web Design/Development

Web Applications

Social Media and Digital Marketing

## Professional Skills

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### Malware Analysis

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

### 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

### Programming and Scripting

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

## Soft Skills

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Fast Learner

Responsible

Performance Under Pressure

Team Work

Multitasking

Stamina

Verbal Communication

Public Speaking

## Languages

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English<sup>a</sup> ● ● ● ● ●

French<sup>b</sup> ● ● ● ● ●

Greek (Native) ● ● ● ● ●

German ● ● ● ● ●

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<sup>a</sup>ETS TOEFL Nov. 2020, Score: 115/120

<sup>b</sup>DALF C1 CERF

## Misc

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Military Service Obligations Fulfilled

2018-2019

Hellenic Navy