Antonio-Dan **Macovei**

Cyber Security & Web enthusiast, studying Security and Network Engineering.

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Education

University of Amsterdam, Graduate School of Informatics *Amsterdam, Netherlands*

M.S. IN SECURITY AND NETWORK ENGINEERING *Sep. 2021 - Jul. 2022*

- Courses: Advanced Security, Advanced Networking, Offensive Technologies, CyberCrime and Forensics

Politehnica University of Bucharest, Faculty of Automatic Control and Computer Science *Bucharest, Romania*

B.S. IN COMPUTER SCIENCE AND ENGINEERING *Sep. 2017 - Jul. 2021*

- Courses: Communication Protocols, Local Area Networks, Network Design, Operating Systems, Security Assessment of Computer Systems, Parallel and Distributed Algorithms

Work Experience

Cloudflare *London, United Kingdom*

SECURITY SYSTEMS ENGINEER *Aug. 2022 - Present*

- Develop features for Cloudflare's **Bot Management module**.
- Improve existing browser challenges in order to better identify bots and constantly research and implement mitigations against attackers efforts to circumvent these safeguards.

BIT SENTINEL *Bucharest, Romania*

PENETRATION TESTER *May. 2021 - Jul. 2022*

- Perform **manual penetration testing** and **security assessments** on networks, web-based applications, and computer systems.
- Document findings, write security reports, and discuss solutions with the IT teams and the managers. Provide feedback and verification after security fixes.
- **Develop new scripts and tools** in Python to automate time-consuming processes. Created a program to identify chatter about new CVEs on social media and raise alerts on hot topics.
- **Propose and implement** challenging security exercises for CTF competitions such as DefCamp DCTF and Unbreakable Romania.

Invictus Incident Response *Amsterdam, Netherlands*

SECURITY RESEARCHER *Jan. 2022 - Feb. 2022*

- Conducting a research project in collaboration with University of Amsterdam on the theme of **"Automated Incident Response in the Cloud: An Environment Agnostic Solution in AWS"**, with a focus on the first two steps of the NIST IR Life Cycle.

SecureWorks Europe *Bucharest, Romania*

INFORMATION SECURITY ANALYST *Jun. 2020 - May. 2021*

- Investigated and documented high level threats, determined the extent to which client assets have been compromised, made recommendations for remediation and assisted in their implementation.
- Performed analysis of security events from multiple sources including but not limited to events from **SIEM** tools (**Splunk**, **CTP**), **EDR** (**CarbonBlack**, **RedCloak**, **Crowdstrike Falcon**), network and host based IDS, firewall logs, system logs (**Unix & Windows**).
- Assisted in the remediation of a **major incident** and helped restoring the business processes **10% faster than usual** due to my investigative efforts.

SSS - Security Summer School (Politehnica University of Bucharest) *Bucharest, Romania*

WEB SECURITY TEAM COORDINATOR *Sep. 2020 - Jul. 2021*

- Lead a team of **10 people** through the preparation of content and challenges for the next edition of the summer school.
- Restructured the course content to train students on vulnerabilities resembling real-life situations, offering an overview of the entire attack process, from **reconnaissance** to **initial foothold** and **full system compromise**.

VOLUNTEER *May. 2020 - Jul. 2020*

- Taught students **Web Security concepts** in multiple 4 hours sessions, ranging from basic web knowledge to advanced attacks.
- Developed content and challenges for Web Security classes.

Politehnica University of Bucharest *Bucharest, Romania*

UNDERGRADUATE TEACHING ASSISTANT *Sep. 2018 - Present*

- Created and graded tests for **over 150 students** attending the Introduction to Assembly Language and Computer Organization Course.
- Graded homework assignments written in C and ASM x86.
- Conducted **oral examinations** with second year students, assessing their knowledge on the subject at the end of the semester.

Nordic Import-Export CO *Bucharest, Romania*

IT TRAINEE *Dec. 2017 - Jan. 2019*

- Created a web app for the HR department to better organize their files and records more efficiently by automatically generating prefilled forms.
- Improved the efficiency of the department by removing repetitive tasks, such as manually filling forms for sick leave, resignations and certificates, **saving 5 hours per week**.

B-Zone Community (Gaming Community) *Remote, Romania*
WEB DEVELOPER *Dec. 2015 - Oct. 2018*

- Designed and implemented important features of the game servers websites, such as account recovery, surveys and unban requests system.
- Enabled **thousands of users** to access their data with ease and perform daily actions from their browser (e.g. view detailed statistics, report players, vote new leaders and rules, etc.)
- **Improved page response time by 75%** by optimizing SQL queries and data structures.
- Worked with Symfony PHP Framework and Doctrine ORM to develop core functionalities, while leveraging MySQL to query a large database.

Personal Projects

NUTSEC Platform *2021*

- Online platform designed to **automate the process of generating environments for security challenges**, based on simple configuration files.
- Created a set of agents, allowing for easier deployment, directly on users' hosts and managed from the online interface.

Personal Blog *2020*

- Designed a personal blog focused on **offensive security**, featuring write-ups and walkthroughs from **CTF competitions and hacking challenges** (such as **HackTheBox**, **European Cyber Security Challenge**, etc.).
- Documented a broad set of vulnerabilities and attacks discovered in applications, oriented towards knowledge-sharing.

 https://antoniomacovei.com/blog, HackTheBox Profile

Josi Online Shop *2020*

- Created an online grocery store from scratch, helping a business in the food service area handle the pandemic by moving their operations online and enabling people to order base aliments directly at their homes.

- Built the web platform using the Laravel Framework, **supporting hundreds of daily users** and orders.

Topic Messaging Application *2019*

- Developed a **C application focused on networking** which allows users to subscribe to channels of interest using TCP connections while important messages are broadcasted by UDP clients. Offline messages are stored for later retrieval.

 GitHub

Miva Delivery *2017*

- Designed a web platform which enabled a local restaurant to expand their business in the online environment, **allowing tens of daily customers** to order food from their browsers.
- Implemented all back-end functionalities from scratch, such as checkout, products cart, account settings, administration panel, etc.

 http://mivadelivery.ro

Achievements

2022	**Speaker**, DefCamp Security Conference - Paper: **Mario Kart Tour - Security and Anti-Tampering**
2022	**35th Place**, Meta Bug Bounty Program Hall of Fame (Global)
2022	**3rd Place**, RoCSC - Romanian Cyber Security Challenge, Seniors
2021	**4th Place**, RoCSC - Romanian Cyber Security Challenge, Seniors
2021	**1st Place**, RST CTF - Romanian Security Team
2021	**2nd Place**, IsolationCon 2 CTF
2021	**3rd and 5th Place**, Unbreakable Romania CTFs (Individual and Team Competition)
2020	**9th Place**, DefCamp CTF (International, over 400 teams)
2020	**Participant**, Cydex20 - National CyberSecurity Exercise
2020	**11th Place**, RoCSC - Romanian Cyber Security Challenge, Seniors
2020	**13th Place**, ECSC - European Cyber Security Challenge, Romanian National Phase, Seniors

Certifications

Aug. 2020 **Security+**, CompTIA

May. 2019 **Applied Web Application Security**, Metropolia University of Applied Sciences, Finland

Feb. 2017 **Advanced English - Level C1**, Cambridge English (CAE)

Organizations

ROSEdu - Romanian Open Source Organization
VOLUNTEER *Sep. 2018 - Sep. 2021*

- Organized events for students, such as Linux Install Fest, Coding Competitions, etc.

LSAC - Students League of Automatic Control and Computer Science
VOLUNTEER, IT DEPARTMENT *Oct. 2017 - Jun. 2019*

- Led a team of **5 people** towards the successful implementation of MOFT (Museums, Opera, Films, Theaters) cultural event.
- Built a website for the students who wished to acquire tickets to the cultural events promoted during MOFT.