

Radu-Constantin ONUȚU

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Bucharest, Romania

EXPERIENCE

Intuitext

May 2022 – Present

Data Analyst

Bucharest, Romania

- Analyzed and processed large datasets from national exams ("Evaluare Nationala" and "Bacalaureat") for the Ministry of Education, utilizing Python (pandas) and Excel to generate comprehensive statistics and insights. These reports were then submitted back to the Ministry, receiving positive feedback for their thoroughness and relevance.
- Created ranking models for high schools across the country based on average admission scores, which were part of our educational platform admitereliceu.ro.
- Implemented a REST API using Flask to build a tool for detecting plagiarism in documents uploaded to didactic.ro, enhancing the platform's document verification process.

Bitdefender

Dec. 2024 – Dec. 2024

Practical Training in Offensive Security

Bucharest, Romania

- Executed a simulated attack involving three machines: an attacker machine (Linux), a Windows target machine, and a Domain Controller.
- Generated and obfuscated a Cobalt Strike payload to establish a beacon connection between the attacker and the target.
- Performed network discovery and Active Directory (AD) discovery to identify a Domain Controller, followed by a lateral movement using a Pass-the-Hash attack.
- Created a shadow copy of the volume containing the **NTDS.dit** file, extracted it, and transferred it to the attacker machine for analysis.
- Mapped the attack techniques to the MITRE ATT&CK framework. 🔗

EDUCATION

University of Bucharest, Faculty of Mathematics and Computer Science

Oct. 2024 – July 2026

Master of Science - MS, Security and Applied Logic

Bucharest, Romania

University of Bucharest, Faculty of Mathematics and Computer Science

Oct. 2021 – July 2024

Bachelor of Science - BS, Mathematics and Computer Science; Grade: 9.50/10

Bucharest, Romania

PROJECTS

Anomaly Detection of DHCP Starvation Attacks 🔗

- Reimplemented an anomaly detection system to identify DHCP starvation attacks in a controlled environment.
- Set up two virtual machines in VirtualBox: one running Ubuntu as a DHCP server configured to allocate 1024 IP addresses in the range of 192.168.0.0 to 192.168.3.255, and another acting as an attacker.
- Simulated real-world conditions by sending DHCPDISCOVER messages at random intervals (captured with Wireshark) and trained an algorithm that successfully detected the attack.

Address Space Layout Randomization - Effective or Not? 🔗

- A survey paper discussing the effectiveness of ASLR in 32-bit architectures.

CTF Writeups

- List of my writeups for CTF challenges: github.com/ronutu/ctf-writeups.

PDF Converter | Python, PyMuPDF, MySQL, tkinter

- Automation app for converting PDF textbooks into HTML pages.
- Reduced the conversion time from 3 weeks to under 1 week, with a similarity score of 82%.
- Successfully used this project both at my workplace and as my bachelor thesis, receiving a grade of 9.5/10.
- Implemented an efficient workflow consisting of extraction, data cleaning, grouping, and writing to HTML.

SKILLS

Languages: Romanian (Native), English (Fluent), Chinese (HSK 1)

Programming Languages: Python, C/C++, C#, Java, JavaScript

Tools: Cobalt Strike, VMware, VirtualBox, Wireshark, Ghidra, dnSpy, dotPeek, Git, Docker, UiPath Studio

Hobbies: Hiking, Cycling, Snorkeling, Scuba diving, Skiing