Michal Markevych

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SUMMARY

As a passionate and motivated individual with publications in the Cybersecurity and AI Space, I am excited to apply my computer and biomedical engineering problem solving skills into the Penetration Testing/Cybersecurity Analysis field. With a Masters in Cybersecurity and a passion for continuous learning, I have gained expertise in vulnerability assessments, penetration testing, IDS/IPS systems, data protection, and scripting.

EDUCATION

Illinois Institute of Technology, Chicago, IL — December 2023

Master of Security and Cyber Forensics

- Certification Courses taken for Comptia Linux+, CySA+, Network+, Security+

Bachelor of Science in Computer and Cybersecurity Engineering

- Specialization in Security of IoT

PUBLICATIONS

"A Review of Enhancing Intrusion Detection Systems for Cybersecurity Using AI" — June 2023

- KNOWLEDGE-BASED ORGANIZATION Conference in Sibiu, Romania
- Presented findings on AI-based IDS systems in front of a panel of colonels and security professionals
- Developed a test data flow model using the GPT-4 model to simulate operation of IDS

SKILLS

- **VULNERABILITY TESTING AND SECURITY TOOLS** : Nmap, Burp Suite, SIEM, Metasploit, Nslookup, whois, dig, Hydra, John-the-ripper, Dirb, Maltego, Flawfinder, FindBugs
- **ENGINEERING DEVELOPMENT AND CODING**: Java, Python, Bash/Powershell/Python Scripting, Arduino/C++
- **COMPLIANCE AND REGULATORY FRAMEWORKS:** NIST SP 800-53, SOC 2, PCI DSS 4.0, MITRE ATT&CK, Cyber Kill Chain, ISO 27001
- **LANGUAGES**: English and Polish

PROJECT EXPERIENCE

Azure SIEM system — October 2023

Personal Project

- Successfully implemented an Azure Sentinel cloud-based Security Information and Event Management (SIEM) system as part of a cybersecurity project.
- Deployed a highly vulnerable virtual machine (Honeypot) on the Azure cloud platform, deliberately exposing it to the internet to attract and monitor potential cyberattacks.
- Actively monitored and logged a wide range of cyberattacks from various IP addresses using custom workbook queries.
- Leveraged Azure Sentinel and AI mapping software to transform attack data into a geographical map, allowing for the visualization of attack origins by country.

RSA Encryption Program — January 2023 - May 2023

Illinois Institute of Technology

- Developed an RSA Encryption program in python, gaining a deep understanding of the RSA encryption algorithm and its underlying principles.
- Independently designed auxiliary scripts, implementing a robust Miller-Rabin primality test with multiple iterations to enhance the reliability of prime number verification.

- Crafted keygen.py, a comprehensive Python script that computes RSA public and private key pairs by calculating modulus, Euler's totient function, and employing modular arithmetic.

Cybersecurity Policy August 2022 - December 2022
Illinois Institute of Technology
- Led a team of 4 Masters and PhD Students to create a functioning security policy specifically targeted at Web Application Security, Acceptable Use Policy, and Role Definitions.
- Implemented an effective Information Security policy to maintain confidentiality, integrity, and availability of university resources with adaptations from NIST Cybersecurity Framework.
- Addressed vulnerabilities in the university's website, focusing on authentication, SSL certificates, web application headers, and cross-site scripting.

Hyperloop - Electrical Lead January 2019 - November 2020
Hyperloop IIT
- Calculated quantity and wiring of battery cells to power MagLev Hyperloop Pod saving $2,000.
- Lead the electronics team by coordinating weekly objectives and delegating tasks to efficiently meet showcase deadlines.

WORK EXPERIENCE

Biomedical Engineer
Vomark Technologies, Wheeling, IL July 2018 - Present

- Repaired hardware and software issues on a variety of SIEMENS and PHILIPS ultrasound machines to resolve technical issues on over 200 machines.
- Developed protocol for handling software issues during system-software discrepancies leading to cut down of new engineer onboard training by 5 hours.
- Improved efficiency of exportation of ultrasounds by 8% over the course of 18 months.
- Promoted within 12 months due to strong performance and impact on ultrasound exportation process.

Embedded Systems Engineer Intern
Adler Planetarium, Chicago, IL March 2020 - March 2021

- Completed arduino coding training and within 2 weeks integrated GPS on NiteLite (night imaging balloon satellite which analyzes light pollution over Chicago’s skyline).
- Designed PCB’s for satellite’s magnetic compass leveraging Eagle with a team of engineers, bringing the prototype from stage 3 to stage 4.
- Debugged faulty arduino code for tracking in satellite prototype, allowing engineering team to develop next stage of movement sensors.

CERTIFICATIONS

- CompTIA Security+ October 2023

HONORS AND ACHIEVEMENTS

- As the captain of the NCAA Division III Men's Volleyball Team at IIT, led the team in kills, earning honorable mention for All-Conference player of the year
- Dean’s List at Illinois Tech, multiple semesters August 2022 - August 2023
- Completed thesis on *IoT Issues and the Promise of SDN Technology* August 2021 - March 2022