Josh Rabinowitz

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SKILLS

- Administering and securing operating systems including Linux (Ubuntu, Kali, Mint, CentOS), OS X, Windows, Android; virtualization using VMware, Virtualbox; configuring production level enterprise networks using Cisco IOS (routing & security)

- Programming in Assembly, C/C++, Java, Ruby, PHP, SQL, web languages (HTML, CSS, JavaScript); scripting in Python, Bash

- Penetration testing web/mobile applications using Burp Suite, SQLmap, Nessus, dirb, Drozer, dex2jar, apktool; strong knowledge of OWASP Top 10

- Network penetration testing using nmap, Wireshark, Metasploit, netcat, scapy, openssl

- IoT & embedded security; using software/tools including U-Boot, BusyBox, Yocto, dd, binwalk, fastboot, ADB, flashrom

- Interfacing with hardware/firmware using protocols such as UART, JTAG, SPI, I2C, ICSP; wireless protocols including Bluetooth, Zigbee, Z-Wave, RF; tools including JTAGulator, Shikra, Bus Pirate, ApiMote/Killerbee, Ubertooth One, Saleae logic analyzer, oscilloscope, multimeter

- Analog/digital signal processing, signal interception, waveguide/antenna design; Software Defined Radio using RTL-SDR, HackRF One, GQRX, GNU Radio

- PCB design, soldering, chip removal, component identification, firmware extraction/analysis, datasheet analysis; offensive tooling using EAGLE, LTSpice, Arduino, Teensy, Raspberry Pi, 3D Printing

- Reverse engineering & malware analysis using IDA Pro, Ghidra, GDB, OllyDBG, WinDBG, Radare2

- Exploit development, source code review, architecture review, fuzz-testing/RCA, fuzzer design, threat modeling, automation

- Familiar with use of cryptography in modern applications, as well as basic cryptanalysis and steganalysis tools & techniques

- Red team tools & techniques (physical security, social engineering; lockpicking, phishing, 'evil twin' attacks)

PROFESSIONAL EXPERIENCE

NCC Group *Chicago, IL*
Associate Security Consultant *August 2019-April 2021*
- Lead security assessments including penetration tests, architecture reviews, threat modeling, reverse engineering, malware analysis, staff augmentation and training, providing clients with clear, organized deliverables
- Provided services both on-site and remote for a wide range of clients ranging from small or medium-sized startups to 'Big Four' tech giants and major film studios
- Assisted with interview and hiring of new security consultants; developed training exercises to teach embedded security

NCC Group *Chicago, IL*
Security Intern *June 2019-August 2019*
- Gained experience as a consultant, testing web/mobile applications for vulnerabilities and reporting them to clients along with my recommended mitigations
- Conducted research on the security of a popular IoT product, and crafted a whitepaper documenting my methodology and results
- Collaborated with seasoned security experts from across the globe and clients from a wide range of industries

Upwork *Remote*
Freelance Consultant *May 2018-August 2018*
- Tested full stack web applications for common web vulnerabilities (e.g. OWASP Top 10) and authored patches
- Interpreted results from commercial vulnerability scanners such as Nessus and ZAP, determining false positives using a mix of code review and dynamic analysis

CERTIFICATIONS & AWARDS

- Cisco CCENT Certification
- James Scholar Honors Student (UIUC)
- Illinois State Scholar

EDUCATION

DePaul University
Major: Cybersecurity; Minor: Computer Science
Relevant Coursework:
- Information Security Engineering I & II
- Host-Based Security
- Applied Networks & Security
- Telecomm/Network Sec. Practicum

University of Illinois Urbana-Champaign
Major: Electrical Engineering
Relevant Coursework:
- Computer Engineering
- Digital Signal Processing
- System Programming
- Microelectronic Circuits Lab

ADDITIONAL EXPERIENCE

Engineering Student Alumni Ambassadors *Champaign, IL*
Co-Director of Events *August 2014-May 2016*
- Fortified student-alumni relations through outreach and receptions
- Instructed a committee in planning and hosting university events

Illinois Robotics in Space *Champaign, IL*
Power Team Coordinator *August 2014-May 2016*
- Supplied power circuitry for lunar mining robot to be entered into NASA competition
- Designed power converters using advanced simulation software and custom-made, hand-soldered PCB's