

MATTHEW HAGAN

Austin, TX

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WORK EXPERIENCE

Rapid7, Penetration Tester Austin, TX, Jan 2022 – Present

- Consulted for top Fortune 500 companies to conduct web application, API, internal, external, wireless network, phishing, vishing based penetration testing.
- Performed voluntary security research on multiple undisclosed Fortune 500 entities. This research led to highly impactful zero-day findings that were responsibly disclosed to said entities.
- Interacted directly with client senior leadership to scope engagements, document vulnerability findings and present those findings directly to over 80 client executive teams.
- Improved processes by developing internal-team tooling and comprehensive playbooks/documentation.

Rapid7, Software Security Engineer Austin, TX, Aug 2020 – Dec 2021

- Pioneered a weekly penetration testing lab series aimed at increasing security knowledge for developers. This resulted in 11 different teams gaining first hand knowledge of an attacker's mindset over 15 months.
- Re-engineered company-wide Jenkins CI/CD pipeline utilizing VCenter and Chef configuration-as-code. This resulted in saving over 400 man hours per month across hundreds of developers.
- Migrated Metasploit Pro from Ruby on Rails 4 to 5 while adhering to test-driven development standards. This resulted in the removal of 27 distinct customer-facing bugs.
- Developed in Java, Spring and Terraform to implement a new feature into Insight Vulnerability Management platform that allows end-users to have custom scoped policies tailored to their network needs.

Fidelity Investments, Full Stack Security Developer Merrimack, NH, May 2019 – Aug 2019

- Discovered a critical vulnerability within the baseboard management controllers upon penetration testing new Intel and AMD enterprise infrastructure servers.
- Upon discovery, an extensive security report was designed and delivered on the vulnerability where I directly presented the findings to the Senior Vice President of Fidelity Investments.
- Utilized DevOps development practices in Docker, Go, Python, Bash, and AngularJS to increase performance of cloud-based compute platforms.

PROJECTS

Phisher (Independent Open-Source Tooling) October 2023 – Present

- Developed a Python-based command-line tool that allows for highly accurate voice cloning given a small audio or video sample from web sources (Youtube, TikTok, Twitch, Twitter, and more).
- Used said tool in the aforementioned voluntary security research to circumvent voice-based authentication walls of one of the undisclosed Fortune 500 entities to gain financial account access.

Major Qualifying Project (Senior Thesis) WPI, Aug 2019 – May 2020

- Conducted research to create a security descriptor protocol and firewall middlebox with an elliptic curve external packet wrapper with the aim of preventing botnet attacks for residential consumers.
- Published a summary of my research in a paper entitled, "*Securing residential IoT networks through intent based encryption and categorization*".

EDUCATION

Worcester Polytechnic Institute, Worcester, MA May 2020

Bachelor of Science, Computer Science (Cyber Security) & Electrical/Computer Engineering GPA 3.86/4.00

SKILLS AND PROFICIENCIES

Python, Penetration Testing, Security Assessments (Web Application, API, Internal, External, Wireless, Phishing, Vishing), Application Security, BurpSuite, Java, Spring, Kubernetes, Terraform, Ruby, Rails, C, Go, Swift, Bash, Rust, JavaScript, SQL, C#, x86-64 Assembly, and Angular/AngularJS, AWS Suite (EKS, EC2, MSK, API Gateway, Lambda, RDS, S3, VPC), Jenkins, Chef, Atlantis, Nmap, Metasploit Framework, Aircrack-ng, Wireshark, Docker

CERTIFICATIONS AND LEADERSHIP

Offensive Security Certified Professional (OSCP)

July 2021 – Present

- Achieved the OSCP certification, as measured by a rigorous 48 hour exam and report where the objective was to evaluate the network, identify systems, and exploit flaws while reporting the findings back to Offensive Security. On average, security professionals require 2-3 attempts to pass, whereas this was a pass on the first attempt.
- Employed multiple different vulnerabilities to gain administrative level access to several machines.
- Created and delivered an extensive exam and lab report of my findings to the exam proctors.

Member, AHA (Austin Security Professional Group)

Aug 2020 – Present

Member, Tau Beta Pi (Engineering Honor Society)

Mar 2020 – Present

President, Eta Kappa Nu (IEEE Honor Society)

Dec 2018 – Dec 2019