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# Ryan Mower

## **OBJECTIVE:**

A current information security engineer seeking an opportunity to learn and assist with Red Team operations, develop payloads and exploits, and drive process automation.

## **EDUCATION:**

# College

• University of Minnesota, Twin-Cities, College of Science and Engineering 2019-2023

• Bachelor | Master of Science in Computer Science

North Dakota State University
2018-2019

• GPA: 4.00

## Coursework

• Operating Systems I, II Computer Networks I, II, III Secure Software Systems I, II, III 2020-2023

Machine Architecture Advanced Programing Parallel/Distributed Computing

## TECHNICAL SKILLS AND COMPUTER SCIENCE KNOWLEDGE:

- BurpSuite, Ghidra, AFL Fuzzer, Metasploit, Nmap, LLVM
- C/C++, Java, Python, SQL, Git, Docker, JavaScript
- 5G Network, 5Greplay, VIM, PwnTools, Virtualization
- Microsoft Office, Google Suite, Domo, Power Apps

#### **ACCOMPLISHMENTS:**

- First author on *Graphics Card Based Fuzzing* IEEE Computer Society
- Dean's List 2019-2023

#### **WORK EXPERIENCE:**

# **Associate Information Security Engineer**

Summer of 2023-Present

- Retested discovered vulnerabilities, developed proof-of-concept exploits
- Coordinated penetration tests between application teams and penetration testers
- Automated processes, conveyed remediation techniques to application teams

# **Network and Security Research Assistant**

2022-2023

- Compiled 5G network infrastructure with CFI enabled via the LLVM framework
- Reverse engineered IoT devices, fuzzed 5G network protocols and discovered vulnerabilities
- Captured and sanitized egress data from IoT devices with fake information to the cloud

## **Optum Software Security Engineer**

Summers of 2021-2022

- Developed web portal, performed agile development with DevSecOps
- Interacted with: REST API's, LDAP, MySQL, Kubernetes, Docker, Express, React
- Scanned applications with Fortify, pentested web portal, fixed vulnerabilities
- Collaborated with teammates and peers, practiced daily scrums, presented project

# **INDEPENDENT WORK:**

#### **Enterprise Hack the Box**

Summer of 2023-Present

- Participating in penetration testing course Optum penetration testers developed
- Learn penetration testing techniques, actively use various pentest tools

## **NetSPI Dark Side Ops II - Adversary Simulation Training**

Fall of 2023-Present

• Implement defensive bypasses, public research, and modify existing toolkits

# NetSPI Dark Side Ops I - Malware Dev Training

Fall of 2023

- Learned several execution vectors, payload generation, automation, staging, command and control, and data exfiltration.
- Hands-on experience with Throwback C2 and modern antivirus bypassing techniques

# **Actively Compete in Hack the Box**

2020-Present

- Pentest boxes gaining both user and root level access in a CTF fashion
- Common tools include Nmap, Gobuster, Metasploit, BurpSuite, Hashcat, and many others