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# Ryan Mower

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## OBJECTIVE:

A fourth-year computer science student seeking an internship specializing in cybersecurity, with an emphasis on penetration testing, malware detection, vulnerability discovery, and defense.

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## EDUCATION:

### College

- University of Minnesota, Twin-Cities, College of Science and Engineering 2019-2023
- Bachelor and Master of Science in Computer Science
- North Dakota State University 2018-2019
- GPA: 4.00

### Coursework

- Operating Systems I, II
  - Computer Networks
  - Secure Software Systems 2020-2021
  - Machine Architecture
  - Advanced Programing
  - Parallel Computing
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## TECHNICAL SKILLS AND COMPUTER SCIENCE KNOWLEDGE:

- C/C++, Java, Python, OCaml, MATLAB, R
  - MySQL, Git, Docker, Kubernetes, JavaScript, Django
  - Linux, Windows, Macintosh
  - Microsoft Office, Google Suite
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## ACCOMPLISHMENTS:

- First author on *Graphics Card Based Fuzzing* – IEEE Computer Society
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## WORK EXPERIENCE:

### Optum Data Analysis

Summer of 2021

- Developed machine learned models with XGBoost, analyzed data for trends
- Utilized Pandas library for data wrangling, collaborated with peers on specific goal
- Presented project to leadership, collected data via REST API's and SQL queries

### Optum Software Security Engineer.

Summer of 2020

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

### Research Experience for Undergraduates in Cybersecurity

Summer of 2019

- Researched autonomous vulnerability discovery, communicated efficiently with peers
  - Analyzed data, critically thought about challenging problems, wrote technical paper
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## INDEPENDENT WORK:

### Command and Control Server

Summer of 2021

- Developed C&C server to control a botnet using socket programming in Python

### Python Ethical Hacking Course

2019 - 2020

- Created ARP Spoofer, ARP Spoof Detector, DNS Spoofer, MAC Changer
- Network sniffer, scanner and cutter, Keylogger, download replacer, code injector

### Website (HostASKier)

Summer of 2021

- Used Django web-framework to create blog-style website for connecting water-skiers and waterskiing hosts via certain constraints
  - Features: Various privileged user accounts, user authentication, SQLite, forms, profiles
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## INVOLVEMENT:

2020 - Present

2019 - 2020

- UMNTC Association for Computing Machinery
- UMNTC Intramural Soccer
- UMNTC Club Alpine Ski Team
- NDSU Cyber Security Student Association
- NDSU Men's Club Soccer Team