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Ryan Mower

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.

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
- Machine Architecture
- Computer Networks
- Advanced Programing
- Secure Software Systems 2020-2021
- Parallel Computing

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

ACCOMPLISHMENTS:
- First author on *Graphics Card Based Fuzzing* – IEEE Computer Society
- Dean's List 2019-2021

WORK EXPERIENCE:
Optum Data Analysis Summer of 2021
- Developed machine learned models with XGBoost, analyzed data for trends
- Utilized Pandas library for data wrangling, modeled and interpreted data
- 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
- UMNTC Association for Computing Machinery
- UMNTC Intramural Soccer
- UMNTC Club Alpine Ski Team

2019 - 2020
- NDSU Cyber Security Student Association
- NDSU Men's Club Soccer Team