Rowan Hart

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Education

Purdue University, West Lafayette IN

May 2021

Bachelor of Science in Computer Science

CGPA: 3.49/4.0

Clearance

• Active DoD Top Secret Security Clearance

Technical Skills

- Linux, Windows, and MacOS hardening, vulnerability analysis, incident response, forensics
- C++, C, Java, Python, Shell scripting, Javascript, Vue.js web development
- Reverse Engineering, Exploit development, GTK interface development
- VMWare ESXi Management, Server and network administration, Docker development and deployment
- IDA Pro, Binary Ninja plugin development, Angr symbolic execution development

Relevant Experience

• Purdue University Undergraduate Research Assistant

January 2020 - Present

- Developed automated exploit rehosting tools using the angr symbolic execution framework

• Purdue University Undergraduate Teaching Assistant

August 2019 - Present

- Maintain the codebase for the code standard linter for C programming courses
- Taught and assisted students with C programming and degugging skills
- Developed project specifications and handouts, project and solution source code, and automated test cases

• Northrop Grumman Xetron

May 2018 - August 2020

- Performed reverse engineering of operating system internals, developed C/C++ in a large code base
- Developed an IDA Pro plugin for automated control flow anlysis and path emulation for vulnerability research and exploit development
- Performed vulnerability research on an embedded system and used a variety of techniques to automate analysis
- Created and hosted a Capture The Flag competition, organized and configured infrastructure and created a series of reverse engineering challenges
- Extended the X-RAD binary comparison tool with additional functionality for metric acquisition in C++ and python

• Purdue University b01lers Capture The Flag Team - Event Coordinator

August 2017 - Present

- $\,$ Coordinated, developed, and hosted a public CTF competition with over 650 scoring teams
- Coordinate and create training curriculum development, teaching, and Capture the Flag events to further the skills of team members
- Solve Challenges in Reverse Engineering, Binary Exploitation, programming, web exploitation, forensics, and steganography

• Purdue University CERIAS Collegiate Cyber Defense Competition Team August 2017 - May 2018

 Wrote automation utilities and harden networks, services, and systems against intrusion using industry-standard security techniques.

• Cyber Patriot Team Captain/Co-Captain, LCHS Marine Corps JROTC

August 2013 - June 2017

- Built challenges and virtual environments using VMWare and shell scripting to engage and mentor team members for hands-on learning in a technically challenging environment
- Created scripts and tools to streamline system hardening, vulnerability analysis, and malware identification and remediation on Windows and Linux systems

Honors and Awards

• 1st Place Team member, TAMUCTF

March 2020

• 2nd Place Indiana CCDC Team Member

March 2018

• DefCamp CTF Finals Qualifying Team Member

September 2017 August 2017

Purdue Presidential Scholarship RecipientCyberPatriot IX National Finalist Team Captain

August 2016 - May 2017

• National Honor Society, LCHS

August 2015 - May 2017

• Cyber Patriot Four-time 1st Place State, Four-time 1st Place Regional Team August 2013 - May 2017

October 2016 - August 2017

• Sandia National Labs Thunderbird Cup 1st Place Team Captain

- National Merit Scholarship Finalist Boy Scouts of America Eagle Scout Award

 $March\ 2017$ ${\bf December~2012}$