Rowan Hart

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Education

Purdue University, West Lafayette IN

Masters in Computer Science   **May 2022**

CGPA: N/A

Bachelor of Science in Computer Science   **December 2020**

CGPA: 3.55/4.0

Clearance

- Active DoD Top Secret Security Clearance

Technical Skills

- C/C++, Python, Java, Lua, Shell scripting, Javascript
- Low-level and kernel development and programming
- Reverse Engineering, Exploit development
- IDA Pro, Binary Ninja, and Ghidra plugin development, Angr symbolic execution development
- Linux, Windows, and MacOS hardening, Digital forensics, Incident response
- VMWare ESXi Management, Server and network administration, Docker development and deployment

Relevant Experience

- **Research Innovations Incorporated**   **August 2020 - Present**
  - Binary analysis tools research and development
- **Purdue University Graduate Research Assistant**   **January 2020 - Present**
  - Develop automated exploit rehosting tools using the angr symbolic execution framework
  - Develop automated binary patching tools to improve fuzzing capabilities and coverage
- **Purdue University Graduate Teaching Assistant**   **August 2019 - Present**
  - Maintain the codebase for the code standard linter for C programming courses
  - Teach and assist students with C, Systems Programming, Operating Systems development, 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 and embedded systems, developed large C/C++ and Python projects
  - Developed an IDA Pro plugin for automated control flow anlysis and path emulation for vulnerability research and exploit development
  - Created and hosted a Capture The Flag competition, organized and configured infrastructure and created a series of reverse engineering challenges
  - Extended a binary comparison tool with additional functionality for metric acquisition in C++ and python
- **Purdue University b01lers Capture The Flag Team - Vice President**   **August 2017 - Present**
  - Coordinated, hosted, and developed challenges for multiple public CTF competitions with over 600 scoring teams
  - Coordinate and create training curriculum development and learning 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 hardened networks, services, and systems against intrusion using industry-standard security techniques.

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**
- **Purdue Presidential Scholarship Recipient**   **August 2017**
- **CyberPatriot IX National Finalist Team Captain**   **August 2016 - May 2017**
- **Cyber Patriot Four-time 1st Place State, Four-time 1st Place Regional Team**   **August 2013 - May 2017**
- **Boy Scouts of America Eagle Scout Award**   **December 2012**