Addy Moran

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Education

- Master's in Computer Science, Arizona State University, May 2021

- Bachelor's in Science, Colorado State University, Major in Computer Science and a Minor in Mathematics, May 2018

Tool Suite

- Security Clearance: Secret Interim

- Programming Languages: Java, Python, C/C++, Unix, LaTex, UML, SQL

- Databases: MySQL, SQLite, MariaDB

- Operating Systems: Linux, Windows, OSX

- Web Development: Wordpress, Wix, Weebly

- Full Stack Web Development: Flask, CherryPy, Jinja, HTML/CSS, JavaScript, ReactJS

- Automation: Chef

- Procedures: Scrum, Agile, and Test Driven Devleopment

- Applications

- Text Editors: Emacs, Vim, Eclipse, GEdit, Notepad++

- Virtualization: VirtualBox, VMWare, CypherPath, AWS

- Networking: Wireshark, NMap

- Version Control: GitHub, GitLab, BitBucket, ZenHub

Work Experience

- Raytheon

  - Cyber Threat Analyst, June 2019 - Current

    - Proactively search for cyber attacks and gaps in security measures by leading hunts, acting as a Threat Hunting SME, and by developing training.

  - Software Engineer, May 2018 - June 2019

    - Principle Investigator for an adaptive intrusion detection system for use in embedded communication protocols

    - Prototyped a satellite data reduction algorithm that finds interesting patterns within TLE data

    - Participated in a cyber rotation program (was one of the engineers chosen from Raytheon's four business units)

    - Training

      - Built MIL-STD-1553B and MIL-STD-1760 curriculum for an internal embedded security course.

      - Built cyber curriculum for interns and entry level engineers

    - Raytheon CODE Center

      - Conducted Red Hat and Windows hardening exercises

      - Managed automated patch management project where we used machine learning to prioritize required system and application patches

      - Worked with internal Raytheon programs to test for cyber resiliency and provided suggestions on ways to mitigate potential attacks

  - Cyber Security Engineer Intern, January 2017 - May 2018

    - Avionic Security Network Mapper

      - Received a patent for avionic component identification algorithm

      - Assist in program planning and documentation

      - Design databases to assist in machine learning algorithms

      - Implement additional features to improve user experience

      - Researched known avionic vulnerabilities

      - Assisted in program planning by writing and proofreading system requirements, budget documents, program proposals, and project demonstration documentation

- Designed a database schema and created UML diagrams to reflect the schema
- Created the database and wrote database wrapper classes to assist in full stack development
- Assisted in full stack development to provide intuitive and easy to read results from the avionic data bus device mapping
    - GPS
        - Aided in securing systems by writing and deploying hardening scripts
        - Deployed system and application patching to classified and unclassified systems
        - Helped prepare material for weekly cyber security class
        - Wrote a Python program that looks for classified keywords in documents to help prevent data spills

- Colorado State University
    - Research Assistant, September 2016 - January 2018
        - IoT Penetration Testing:
            - Created Raspberry Pi network monitor for device classification and security vulnerabilities
            - Analyzed network traffic for vulnerabilities
            - Statically and dynamically analyzing device firmware
        - Wrote a Python script that pulls network data and puts the data into a logical structure to help during analysis.
        - Created websites for finished research projects
        - Wrote Python scripts to test the quality of transferred medical data
    - Teaching Assistant, January 2016 - January 2018
        - Teach students concepts in Java, Python, HTML, CSS and UNIX
        - Coordinate review sessions and create study material to break down complex information into more manageable sections
        - Assist professors with curriculum by creating and critiquing homework and labs assignments

Patents & Awards

- Filed provisional patent for exploiting the hacking process to secure embedded protocols, September 2019
- Filed patent for avionic component identification algorithm, September 2019
- Received 2nd place in the Undergraduate Poster Competition at WiCyS, March 2017

Certifications

- Certified Ethical Hacker
- Part 107 Commercial Drone Pilot

Volunteer

- TraceLabs, August 2019 - Present
- Denver Metro Science and Engineering Fair, February 2019
- Girls Day at the Aurora Boys & Girls Club, February 2019

Activities/Presentations

- Presented Hacking Your Day-To-Day Tavel at the Women in Cyber Security Conference (WiCyS), March 2019
- Presented on automated patch management at the Ground System Architecture Workshop (GSAW), February 2019
- Presented a poster on gathering location data from an Android device at WiCyS, March 2017
- Participated on the White Team at the Rocky Mountain Collegiate Cyber Defense Competition (RMCCDC), March 2017
- Presented on the Security of Internet of Things (IoT) poster at Rocky Mountain Celebration of Women in Computing, September 2016

Personal Projects

- Facial Recognition
- Geolocation

Publications

- Steganography
- Hacking Your Day-To-Day Travel
- IoT