

Audrey Dutcher

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Education

Arizona State University – Current PhD student

University of California, Santa Barbara – March 2019 Graduate: Master of Computer Science, 4.0 GPA; March 2018 Graduate: Bachelor of Computer Science, 3.9 GPA

Dos Pueblos High School – 2014 Graduate, 4.6 GPA

Technical Skills

Security auditing for all forms of software, including **reverse engineering** of binary code

Application programming in C, C++, Rust, Python, Go, Bash, Node.js, Java, C#, Linux, Android. Particularly, mastery of **python**, including package distribution

Unix Server Administration – Experience in setup and administration of servers with Apache/Nginx, MySQL/Postgres, Docker, Kubernetes, AWS/GCP/etc

Web Development – HTML/CSS/Javascript, PHP, Python (e.g. Django), Heroku, websockets
Proficiency in writing x86, ARM, MIPS, 65c816, and cLEMENCy **assembly**

Professional Experience

- May 2019 – Sept 2020: Research engineer at ASU SEFCOM, working under professor Ruoyu Wang on binary analysis automation and reverse engineering tooling
- June 2014 – March 2019: Paid research position at UCSB **computer security research lab**, working under professor Giovanni Vigna in the fields of binary analysis and reverse engineering. Core developer and community manager on the **angr** binary analysis project. Player in the **Cyber Grand Challenge** on team Shellphish, winning 3rd place
- Summer 2017, Summer 2018: R&D internship at **Palo Alto Networks**, focusing on automated malware classification and hypervisor development

Academic Publications

SoK: (State of) The Art of War: Offensive Techniques in Binary Analysis, IEEE Symposium on Security and Privacy 2016

Driller: Augmenting Fuzzing Through Selective Symbolic Execution, Network and Distributed System Security Symposium 2016

Competitive Experience – Capture the Flag Competitions

Organized the UCSB iCTF with team Shellphish, 2014, 2016, 2021

Qualified and attended final rounds for DEFCON CTF on UCSB team Shellphish, many years

Qualified and attended final rounds for CSAW CTF, 2013, 2014, 2015, 2016, 2017

Qualified and attended final round for Codegate Junior individual CTF 2014 in Seoul, Korea

First Place Team Member in 2013 PicoCTF national high school hacking competition

Additional resources

<http://github.com/rhelmot> - <http://angr.io> - <http://bit.ly/IqT6zt>