

Zachary M. Wimer

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Education

Arizona State University (ASU)

DOCTOR OF PHILOSOPHY: COMPUTER SCIENCE

GPA: 4.0

Aug. 2018 - PRESENT

Rensselaer Polytechnic Institute (RPI)

MASTER OF SCIENCE: COMPUTER SCIENCE

BACHELOR OF SCIENCE (DUAL MAJOR) : COMPUTER SCIENCE / COMPUTATIONAL MATHEMATICS

MINOR: ECONOMICS

GPA: 4.0

Sept. 2014 - May 2018

Experience

ASU	Scientific Software Engineer , Design, Development, Testing	Jan 2021-PRESENT
Easy Visa	Software Engineer , Design, Development, Testing	May 2017-Jan 2021
TGS	Software Engineer , CI / CD, Sys Admin, Docker, C++	Jan. 2019-PRESENT
ASU	Research Assistant , SEFCOM lab	Aug. 2018-Dec 2020
Private	Tutor , Calculus, Data structures, C++, Python, Chemistry, Physics	Aug. 2013-PRESENT
Private	Independent Contractor , Software Development, Security Consulting	May 2019-Aug. 2020
ASU	Graduate TA , Software Security	Aug. 2019-Mar. 2020
RPI	Mentor , RCOS	Jan. 2017-Dec. 2017
Lutron	Co-op , Computer Science	May 2017-July 2017
RPI	Undergraduate TA (double load) , Foundations of Computer Science	Aug. 2015-Dec. 2015
RPI	Undergraduate TA , Data Structures	Jan. 2015-May 2015

Interesting Skills

CTF experience, As I enjoy hacking, I often participate in CTFs. I have played **Defcon CTF**. *Thrice!*

Hacking, Specifically I am passionate about binary exploitation. I enjoy figuring out subtle or elegant ways to break things, especially when I use a system's own infrastructure to do so.

Linux Internals, Part of hacking is understanding a system very well; to that end I know quite a lot about the internals of Linux. I often read kernel code to figure out how to solve a CTF challenge.

C++ Template Meta-Programming, I enjoy the ability to code in an amazingly versatile, super-fast, compile-time, pure functional sub-language within C++, which is my favorite language.

Computational Mathematics Implementations, I know how to implement mathematics on computers to avoid floating point errors and how to optimize many matrix operations / calculations for speed.

Basic conversational Spanish, Much of my family is fluent in Spanish so I can hold a conversation in it.

Projects

C++, CMake	Claricpp , Extended / replaced parts of claripy with a native C++ component.	2019, 2020
C, Python		
Host, Organizer	WeCTFinASU , I singlehandedly organized a seminal workshop at ASU dedicated to sharing interesting presentations between top tier CTFers in 2019 called the Workshop To Explore Cyber Security in Academic Security Utility. For 2020, we have an organizing committee and sponsors.	2019, 2020
C++, CMake	SubNeural , My research code: A program that can leak the internals of Neural Networks via repeatedly timing evaluations of the network	Oct. 2018-PRESENT
C++, CMake	DrShadowStack , A software defined dynamically implemented shadow stack via DynamoRIO	Feb. 2018-Jun. 2018
Rust, UML	smlr , A (very) fast file de-duplicator	Aug. 2017-Dec. 2017
C++, QT	CAPP-Reporter , A functional CAPP Reporter that works for RPI single and <u>dual</u> majors	Aug. 2016-Jan. 2017

Activities

ASU	Member , Shellphish	Aug. 2018-PRESENT
ASU	Member , Pwndevils	Aug. 2018-PRESENT
RPI	Member / Core , RPISEC	Jan. 2016-PRESENT
RPI	Member , Upsilon Pi Epsilon	Oct. 2016-May 2018
RPI	Member , Pi Mu Epsilon	Feb. 2017-May 2018
RPI	Mentor / Member , Rensselaer Center for Open Source	Jan. 2017-May 2018

Honors & Awards

RPI	Member , CS honor society	2016-PRESENT
RPI	Member , Math honor society	2017-PRESENT
RPI	Member , National honor society	2016-PRESENT
RPI	Member , RPI Dean's Honor List	2014-May 2018
RPI	Recipient , Received Leadership Scholarship	2014-May 2018
RPI	Recipient , RPI's 4.0 Award	2016, 2017
RPI	Recipient , RPI's Founders Award of Excellence	2017