

EXPERIENCE

Software Engineering Intern

Summer 2021

Arista Networks, Austin, TX

Wrote C++ software to handle VXLAN packet encapsulation on simulated network. Implemented functionality to prevent crashing when under spikes of heavy load

Full Stack Developer (Intern)

Summer 2020

40Geo, Houston, TX

Sole software developer for FirstWatch, a reporting software for marine life monitoring to help comply with ocean noise regulations, utilized JavaScript, Elasticsearch, Vue, and Git

TAMUctf Developer

Fall 2019 - Present

Texas A&M, College Station, TX

Designing and creating challenges on various cybersecurity topics such as binary exploitation, reverse engineering, and web exploitation for our university CTF competition which generally averages 500+ teams competing. Have been contracted to create CTFs for other organizations such as SkillsUSA TX and BSides Edmonton

Teaching Assistant

Fall 2019 - Present

Texas A&M, College Station, TX

Lead CS labs (Data Structures and Algorithms, Computer Organization, Introductory Operating Systems), grade assignments (developed software to automate grading), assist with homework and exam design, and maintain office hours

Software Engineering Intern

Summer 2018 & 2019

Trintech, Dallas, TX

Worked on frontend with Angular/Typescript, backend with Java EE and containerized software allowing developers to test locally

EDUCATION

Bachelor of Science - Computer Science

Fall 2017 - Fall 2021

Texas A&M University

- Minor - Cybersecurity
- Major GPA: 3.9 ; Overall GPA: 3.67

VOLUNTEERING

Instructor, *ShiP.py*

May 2020 - June 2020

Helped design and teach an introductory class on Python targeted at people with minimal programming experience so that they could learn a new skill during the shelter-in-place order. We had over 100 people sign up, primarily from students and industry professionals in non computer science fields.

CTF Lead, *TAMU Cybersecurity Club*

May 2020 - Present

Lead the CTF team "ret2rev", composed of Texas A&M students. Design and give presentations on topics such as CTF, Linux, and Binary Exploitation to students. Helped design and run a CTF aimed at entry-level students with over 150 competitors.

ACTIVITIES & AWARDS

NSA Codebreakers 2021 Solver

DARPA FETT Bug Bounty Competition, completed all challenges

Summer 2020

Dean's Honor Roll

Spring 2019

TAMU Vulnerability Research Club Presenter

Spring 2021-Present

PROJECTS

Rusty CHIP8 *Rust*

Emulator for the CHIP8 VM

Sky Menu *Rust, Qt*

Linux application launcher

Transmogrify *Rust*

TUI Hex Editor optimized for binary patching functions

Discord Typed Interactions *Rust*

Code generation utility for the chat application Discord's interaction API which generates static types

CTF Writeups <https://heinen.dev>

Collection of writeups for CTFs

Schadenfreude *Java*

Ghidra plugin for automatic vulnerability discovery

SKILLS

Programming Languages

C++ C Java Python

Rust SQL

Cybersecurity

Reverse Engineering Binary Exploitation

Other

x86 Assembly Ghidra Shell scripting Docker

Linux

Git Object Oriented Programming LaTeX

GDB