

# Nathaniel Simmons

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## Education

### University of Texas at Dallas

*M.S. Computer Science* NSF CyberCorps: Scholarship for Service - GPA: 3.85 Richardson, TX  
August 2023 - Present

• Cybersecurity Concentration Track Expected Grad May 2025

• Coursework: Information Security, Language-Based Security, Systems Security, Network Security

*B.S. Computer Science* Cum Laude - GPA: 3.83 August 2019 - May 2023

• Dean's list recipient, Academic Excellence Scholarship Recipient

• Coursework: Operating Systems, Algorithms and Data Structures, Databases, Machine Learning, AI

### CompTIA

*Security+ Certification* April 2024

## Skills

**Cybersecurity:** Reverse engineering, Exploit development, Network analysis, Packet inspection, Protocol analysis, Web application security, Secure coding, Cryptography, Forensics

**Tools:** WireShark, Burp Suite, Nmap, IDA, Ghidra, gdb, CAN Bus, UART, VMs, REMnux, Kali

**Languages:** Python, C/C++, Java, Bash, Assembly, SQL, HTML, CSS, PHP, Powershell

## Experience

### Lawrence Livermore National Laboratory

May 2024 - August 2024

Cybersecurity Graduate Intern - Critical Infrastructure Resilience

- Reverse engineered programmable logic controller in a team environment using BinSync to enhance security
- Successfully identified vulnerability for PLC and built PoC for demonstrating vulnerability's impact
- Performed static and dynamic program analysis using REMnux on a separated VM network to detect vulnerabilities
- Presented comprehensive findings to a group of 80, including key decision-makers, to inform future initiatives

### UTD Software and Systems Security Laboratory

January 2024 - May 2024

Cybersecurity Researcher

- Integrated a vulnerability scanning application into drone simulation software, proving implementation capabilities
- Utilized multiple data points from the scan to initiate a vulnerability test, identifying potential threats

### Wyzant

December 2020 - July 2023

Private Java Tutor

- Tutored dozens of students in a remote capacity totaling to ~400 hours of instruction
- Formulated lessons and instructed on topics such as algorithms, software design, and API implementation

## Projects

### Bluetooth Android Application

Spring 2023

- Designed and developed a multi-threaded back end in Java/XML for tracking student attendance in the classroom
- Mentored and led a team of five developers, resulting in a MVP application release and subsequent implementation

### Distributed Mutual Exclusion Implementation

Fall 2023

- Programmed a distributed system of nodes that communicate using TCP sockets in Java and Bash
- Implemented Roucairol and Carvalho's resource mutual exclusion algorithm with vector clocks

### Role-Playing Game Engine

Fall 2022

- Designed and developed full stack RPG system using three layered program architecture in Java
- Programmed graphical user interface and database system from scratch in Java
- Features include procedural game generation and scaling of entities based on player progression

## Activities

UTD CTF team – Top 11% USA

Toyota Hackfesta CTF

Dice CTF

Deadface CTF

Cake CTF

DEFCON 2024

PWN College

TryHackMe

Eagle Scout