

# DAVID SANTOS

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## EDUCATION

### University of Texas at Dallas

Richardson, TX

*Bachelor of Science in Software Engineering*

*Aug. 2023 – May 2026*

- **Relevant Coursework:** Cyber Attack and Defense Lab (CS 4459) - Explored 32-bit/64-bit calling conventions, debugged programs with GDB, exploited common C vulnerabilities (gets, printf, strcpy), analyzed binaries with Ghidra, and implemented ROP, binary buffer overflow, ASLR, and shellcode injection techniques.

### Collin College

Frisco, TX

*Associate of Science*

*Aug. 2022 – May 2024*

## TECHNICAL SKILLS

**Languages:** Python, C, C++, Java, JavaScript/TypeScript, SQL, HTML/CSS, Swift

**Cybersecurity:** x86/64, ARM, GDB, pwntdbg, AFL++, Ghidra, Wireshark, Aircrack-ng, Linux

**Cloud & DevOps:** Docker, Git, GitHub, GitLab, AWS (EC2, S3, Athena), Vercel, Render

**Frameworks/Databases:** React, Node.js, Next.js, Flask, Kafka, MongoDB Atlas, Google Firebase

**Hardware & Tools:** ESP32, IoT Devices, Linux, VS Code, Arduino IDE, Custom PC building, VMware

## WORK EXPERIENCE

### Program Manager Intern

Irving, TX

*Fuse Solutions*

*June 2025 – Present*

- **Developed and implemented** software solutions to enhance the internal ticket system, improving efficiency and response times for key clients, including **Boeing**.
- **Automated** data management processes using Microsoft Excel, Smartsheet, and PowerPoint reporting, reducing manual effort by **30+%** and improving accuracy.
- **Created professional documentation and presentations** in Microsoft Word and PowerPoint, enabling clear communication of technical milestones across teams.
- **Conducted intelligence reporting** on phishing email campaigns, identifying attack vectors and contributing to improved organizational cybersecurity posture.
- **Tracked project milestones, deliverables, and risks** using project management tools such as Smartsheet, ensuring **on-time delivery** of project deliverables.
- **Collaborated cross-functionally** and communicated findings effectively, leveraging strong written, verbal, and listening skills while operating as a self-driven problem solver.

## PROJECTS

### ESP32 Wireshark Lab | C/C++, ESP-IDF, WebServer, Wireshark

- **Developed a web-based chat application** using ESP32 microcontrollers as client and server, communicating over Wi-Fi via HTTP.
- **Implemented a lightweight webserver** with dynamic HTML/JavaScript front-end for real-time messaging between ESP32 devices.
- **Exposed all traffic in plaintext**, allowing intentional interception with Wireshark to analyze HTTP requests, responses, and timestamps
- **Created a Man in middle training lab** where peers practiced packet sniffing, detecting chat messages, and identifying protocol weaknesses in real time.

### Network Service Fuzzing Project | C, AFL++, ASAN, GDB

- **Implemented an intentionally vulnerable C service** and isolated parsing logic into a fuzzable target.
- **Ran AFL++ with ASAN** producing **10000+** testcases and uncovering **3** unique crash states.
- **Triage and remediation:** used GDB/pwntdbg to root-cause crashes and implemented bounds checks and safer APIs; published the repo (build + repro instructions).

## LEADERSHIP EXPERIENCE

### AWS Cloud Club Officer

May 2025 – Present

*University of Texas at Dallas*

*Richardson, TX*

- **Participated in AWS Cloud Club workshops**, contributing to knowledge sharing and community building on cloud security best practices.
- **Helped organize and support technical events**, delivering hands-on insights on AWS services and secure cloud configurations.
- **Assisted with recruitment efforts**, driving a **20% increase in active members** within one semester.

### Security Officer, UTD Powerlifting Club

Jan 2025 – Present

*University of Texas at Dallas*

*Richardson, TX*

- **Monitored and maintained club equipment** used by **25+ members weekly**, ensuring a safe training environment by addressing potential hazards.
- **Enforced safety guidelines and educated 30+ members** on correct form, spotting techniques, and gym etiquette to minimize risks.
- **Collaborated with officer members** to foster team cohesion and maintain a structured, safe training environment.