

DAVID SANTOS

469-492-9190 | dsantos4148@gmail.com | david santos.dev | github.com/DavidSantosTXUSA

EDUCATION

University of Texas at Dallas

Richardson, TX

B.S. Software Engineering | Certificate in Cyber Defense

Aug 2023 – May 2026 (Expected)

- Cybersecurity: memory corruption exploitation (buffer overflows, ROP chains, ASLR bypass), binary analysis (**Ghidra/GDB**), network security, access control, threat modeling, and secure application design.
- Data & ML security: encryption, hashing, authentication models, secure coding, database security; regression, SVMs, CNN fundamentals using **Scikit-Learn & PyTorch**.

EXPERIENCE

Program Manager Intern (Security + Full Stack)

Irving, TX

Fuse Solutions

Jun 2025 – Present

- Delivered full-stack and security engineering for **Boeing and Spirit AeroSystems**, building internal ordering and operations tooling used across partner facilities.
- Built an internal ordering platform that **reduced ordering time from 1 hour to under 5 minutes** via fast search, filtering, and automation.
- Automated inventory/backorder workflows, **cutting review time from 1 hour to 10 minutes** and enabling **instant backorder detection**.
- Hardened **input validation, session handling**, and integrated OAuth + role based access control.
- Produced weekly threat reports on phishing activity using header, IP metadata, and sender pattern analysis that **improved executive visibility into active phishing campaigns**

PROJECTS

Toyotron | toyota-toyotron.vercel.app

Next.js, TypeScript, Supabase, Vercel, NVIDIA Nemotron

- Built a **multi-agent LLM system** for personalized car recommendations, inventory lookup, financing comparisons, and test-drive scheduling.
- Agents automatically **draft dealership emails and create Google Calendar events**.
- **1st Place Winner @ HackUTD 2025 (NVIDIA and Toyota Tracks)**. Over 1,100 participants and 160+ teams

Free QR Website | free-qr-website.vercel.app

React, TypeScript, Vite, Tailwind, Vercel

- Built a **free, permanent QR generator** with no logins, subscriptions, or expiration, designed for fast use on mobile and desktop.
- Added **live preview and customization** for clean, print-ready QR codes.
- Deployed as a **lightweight alternative** to paywalled QR tools for students and small teams.

OverLoad | github.com/DavidSantosTXUSA/OverLoad

Swift, SwiftUI

- Developed a **full workout tracking app** with templates, analytics, and persistent history.
- Implemented a **plate calculator** (standard + reverse) and **RPE-based 1RM estimator**. with a visual barbell that renders plates in lbs and kg
- Refactored into **modular components** for persistence, timers, calculators, and UI logic to keep the app easy to extend and maintain

Network Service Fuzzing Project

C, AFL++, ASAN, GDB/pwndbg

- Built an **intentionally vulnerable C network service** for real-world fuzzing practice.
- Created a **custom AFL++ harness** for coverage-guided fuzzing.
- Identified **3 crash classes** (buffer overflow, use-after-free, integer overflow) and triaged fixes using ASAN + GDB

ESP32 Wireshark MITM Training Lab

C/C++, Arduino IDE, Wireshark

- Implemented a **plaintext Wi-Fi chat protocol** on ESP32 boards to expose packets for capture and MITM analysis in Wireshark.
- Designed a **hands-on interception lab** where students reconstructed messages and practiced identifying weaknesses and defenses.

TECHNICAL SKILLS

Languages: Python, C, C++, Java, JavaScript, TypeScript, SQL, PostgreSQL, Swift, Rust

AI/ML: PyTorch, TensorFlow, Scikit-Learn, Pandas, NumPy

Web/Cloud: React, Next.js, Node.js, Supabase, Azure, Vercel, AWS, Docker

Security: GDB, pwndbg, Ghidra, AFL++, ASAN, Wireshark, Burp Suite, Linux

Hardware/IoT: ESP32, UART/I2C/SPI, Arduino

LEADERSHIP & HONORS

AWS Cloud Club Officer

- Organized workshops on AI, security, and cloud; ran a **50+ competitor hackathon** including design, sponsors, and logistics.

Treasurer & Officer, UTD Powerlifting Club

- Managed finances/equipment for **25+ lifters** while coaching technique, safety, and programming.

USAPL Collegiate Nationals Competitor

- Achieved a **nationals-qualifying total** while balancing meet prep and full time coursework.