

Daniel Alejandro Rivera Estrada

El Paso, TX

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EDUCATION

The University of Texas at El Paso (UTEP) - El Paso, Texas May 2026
Master of Science in Software Engineering

The University of Texas at El Paso (UTEP) - El Paso, Texas Dec 2022
Bachelor's Degree in Computer Science,

El Paso Community College (EPCC) - El Paso, Texas May 2019
Associate of Arts in Computer Science

Technological Institute of Ciudad Juarez (ITCJ) – Ciudad Juarez, Chihuahua Dec 2017
Computer Systems Engineering

PROFESIONAL EXPERIENCE

Research Assistant

Aug 2024 - Present

- Collaborated with other research team members, performing network scans to detect Metasploit tools traffic from simulated scenarios utilizing Suricata

PROJECTS

Point of sale website for a restaurant

- Created and modeled HTML pages for each section of the website
- Connected the website to Google Firebase for the storage and retrieval of documents
- Utilized JavaScript to add functionality to the HTML pages
- Hosted the website on Firebase

Created an Intrusion Detection System for a Simulated Cyber-Physical System Network using pyModBus

- Utilized pymodbus to establish connection and poll OpenPLC simulated devices in multiple VMware virtual machines
- Captured and analyzed traffic to detect anomalies using pyshark

Animations and Songs for Micro Controller MSP-430

- Used C and the MSP430 libraries to program buttons into triggering animations and songs upon being pressed.

Exploit a Documented Vulnerability

- Created a client program and a server program that would connect by using sockets
- Created a key logger on Python to take advantage of Git 2.12 documented exploit.

Created a CRUD Application for a Social Media Service

- Created the DAO, service, model and controller layers for the retrieval of user information such as messages or account information from a database.
- Utilized Javalin, SQL and JSON to create http requests for the retrieval of user information from a database.

SKILLS & ABILITIES

Languages: Java, Python, Dart, SQL, C++, C#, HTML, PHP, JavaScript, Assembly, C, Haskell

Tools: Binary Ninja, UPX, Bandit, IdaPro, Ghidra, Wireshark, Git, VirtualBox, VMware, Cygwin, Emacs, IntelliJ, NetBeans, Eclipse, Visual Studio Code, Visual Studio 2019, PyCharm, React, Node, Express, MongoDB, MySQL, XAMPP, Google Firestore, Dshell, Volatility, ModBusPal.

RELEVANT COURSEWORK

- Computer Architecture
- Design Implementation Programming Languages
- Software Engineering: Design & Implementation
- Parallel Computing
- Ethical Hacking
- Computer Security
- Software Reverse Engineering
- Software Vulnerabilities
- Theory of Operating Systems
- Networks for Cyber-Physical Systems

CONVENTIONS & EVENTS

- Great Minds in STEM 2022
- Cybersecurity Hackathon UTEP Apr 2024
- Society of Hispanic Professional Engineers 2023