

Jair Ramirez

871 Lake Carolyn Pkwy, Irving, TX 75039

(512) 913-3021 | jairr0813@gmail.com

 <https://github.com/JairCodes>

 <https://www.linkedin.com/in/jair-ramirez->

 <https://jairramirez.tech>

EDUCATION & CERTIFICATIONS

Bachelor of Science in Computer Science (Minor: Mathematics)

Texas State University

Aug. 2025

San Marcos, TX

Relevant Coursework - ○ Data Structures & Algorithms ○ Object Oriented Programming ○ Database Systems ○ Technical Writing
○ Computer Architecture ○ Computer System Security ○ Computer System Fundamentals ○ Machine Learning

Certifications:

- Security+ Certification (CompTIA)
- Certified Defensive Security Analyst (Hack The Box)

In Progress

In Progress

PROFESSIONAL EXPERIENCE

Software Engineer - AI Consultant

Apr. 2024 - Present

Outlier AI

Remote

- Accomplished **alignment of AI model outputs** with user expectations by evaluating results based on specific user criteria.
- Enhanced **AI model performance** by developing ideal responses that served as benchmarks for training data, aligning model behavior with user prompts.
- **Documented real-time troubleshooting processes** to create comprehensive records of complex AI model challenges, resulting in optimized training data.
- Improved **development efficiency** by swiftly troubleshooting and resolving AI model issues.

PROJECTS

VM SandBox Project | VirtualBox, pfsense, Ubuntu, Kali Linux, Win XP, Win 95, Wireshark |

Nov. 2024

- Designed and deployed a VirtualBox + pfSense virtual network with four OS-based subnets, enforcing firewall and access-control policies.
- Executed penetration tests on two Windows exploits (MS08-067, MS17-010) and simulated phishing attacks, using Wireshark to analyze traffic and remediate vulnerabilities.
- Documented system configurations and attack methodologies, collaborating with team members to overcome technical challenges and reinforce security best practices.

Critical Threats in Modern Systems | MySQL, PostgreSQL, SQL, ER Modeling |

Apr. 2025

- Built a CVE vulnerability tracking system for SecureTech Solutions using NIST data to classify and document major threats (XSS, SQLi, RCE, buffer overflows, and info disclosure).
- Developed SQL queries and views to reveal risk trends, map CVSS severity to mitigation strategies, and support evidence-based prioritization of remediation efforts.
- Deployed the system in both MySQL and PostgreSQL with enforced primary/foreign keys, validating schema integrity and ensuring consistent query results across platforms.

Machine Learning NIDS Project | Python, Pandas, scikit-learn, TensorFlow, Matplotlib, Seaborn |

Apr. 2024

- Aggregated 2.8 M flow records from eight CICIDS2017 CSVs, removed 9.6% duplicates, handled edge cases ($\infty \rightarrow \text{NaN}$), and standardized 78 flow features.
- Benchmarked Random Forest (78% accuracy), weighted SVM (75% WebAttack recall), and DNN (weighted F1 0.73), and presented findings that revealed trade-offs between overall accuracy and rare-attack detection.

Home Networking Lab | Cisco Routers & Switches, VLANs, Routing Protocols, PuTTY |

Jan. 2025

- Configured VLAN segmentation, inter-VLAN routing, and trunking on Cisco 1841/2801 routers and Catalyst 3550/2960 switches to manage cross-subnet traffic flows.
- Implemented port-security measures and dynamic-routing protocols via CLI (PuTTY) to enforce access control and ensure network scalability.
- Analyzed packet captures with Wireshark to troubleshoot connectivity issues and optimize performance in a segmented environment.

TECHNICAL SKILLS

Programming Languages - ○ Python ○ Java ○ C++ ○ C ○ SQL ○ MIPS32

Software - ○ Splunk ○ Wireshark ○ Linux ○ Windows OS ○ AWS EC2 ○ VisualStudio Code ○ GitHub ○ PuTTY

○ Kali Linux ○ Ubuntu Linux ○ Debian ○ Pfsense ○ Oracle VM ○ MySQL ○ Excel

Networking - ○ Network Protocols (e.g., TCP/IP, UDP, HTTP, DNS, DHCP) ○ Routing & Switching ○ Firewall Configuration

○ Network Analysis & Troubleshooting ○ VLAN Management ○ Subnetting

Security - ○ Security Monitoring & Threat Detection ○ Incident Response Frameworks (NIST, CIS) ○ Penetration Testing

○ Log Analysis & SIEM ○ Intrusion Detection & Prevention ○ Risk Management ○ OWASP Top 10

LEADERSHIP EXPERIENCE

Peer Tutor – Database Systems & Calculus III

Texas State University

- Led peer tutoring sessions to help students better understand SQL, ER modeling, and multivariable calculus concepts.
- Reinforced technical communication and problem-solving through small-group guidance and exam preparation.