# Jaylon Ignacio

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# Education

# **CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO (CSUSB)**

Bachelor of Science, Information Systems and Technology, Cybersecurity | GPA: 3.6

San Bernardino, CA May 2025

~ Minor in Computer Science

#### Honors/Awards:

- The CyberCorps® Scholarship for Service Program (SFS) Recipient
- · Recipient of Dean's List Academic Award

# **Experience**

#### THE MITRE CORPORATION

#### Cybersecurity Engineer (Full-Time)

July 2025 - Present

 Developer on a versatile software framework for penetration testing embedded bus systems such as, MLSTD1553 and ARINC429.

# Cybersecurity Intern - NLP Specialist (Full-Time)

June 2024 - August 2024

- Developed an NLP-based tool to analyze conversational data for potential trafficking activities, utilizing Flask, Elasticsearch, and Kibana to process and visualize results efficiently.
- Implemented a user-friendly interface and Docker containerization for the project, resulting in a scalable prototype that effectively identifies coded language patterns in unprocessed data.

#### PACIFIC NORTHWEST NATIONAL LABORATORY

#### Cybersecurity Intern (Part-Time/Full-Time)

July 2023 - June 2024

- Worked with a collaborative team to write a research paper for the Federal Energy Management Program (FEMP)
  concerning the security risks associated with the integration of cloud architectures and IT/OT infrastructures for
  federal facilities.
- Lead software developer for the development of a game written using the Next.js web framework, for the United States Army, simulating diverse cyber attack scenarios, and engaging users in real-time problem-solving challenges.

#### CYBER SECURITY CENTER AT CSUSB

#### VMware vSphere System Administrator (Full-Time)

August 2022 - December 2023

- Utilized expert-level proficiency in VMware vSphere administration and PowerCLI scripting to automate routine tasks and streamline operations, including the efficient deployment of over 10,000 machines per semester.
- Implemented efficient resource allocation strategies to optimize cloud infrastructure utilization for around 1,000 students per semester and ensure smooth operation of the environment.

# **Projects**

#### POST-QUANTUM CRYPTOGRAPHY (PQC)

### PQC on Constrained Networks in Collaboration with NSA

August - December 2023

- Developed a test environment using Docker containers to evaluate post-quantum algorithms, focusing on identifying potential complications related to their increased size relative to modern encryption methods.
- Analyzed the impact of larger algorithm sizes on network performance, while controlling network variables like
  packet loss and latency to determine under which circumstances these algorithms could potentially fail.
- Simulated real-world network conditions to assess the viability of these algorithms in resource-limited scenarios.

# CYBER INTELLIGENCE AND SECURITY ORG. (CISO)

CISO-Next August 2023 - May 2025

- Transformed the website's core from basic HTML/CSS to a dynamic and scalable architecture using Next.js, React, TypeScript, and TailwindCSS, to significantly improve user experience and interface design. URL: https://ciso-csusb.org
- Steering the ongoing migration of our website from a third party hosting solution, Namecheap, to a self-managed Proxmox infrastructure, focused on achieving improved performance and scalability.

#### **SERIAL SCRIPTER V2 NEXT**

#### Extended Detection and Response (XDR)

July 2023 - May 2025

- Created Serial Scripter V2 using Next.js, achieving a more polished production application, crucial for operation in resource-limited, insecure networks.
- Transitioned to a Docker-contained PostgreSQL database for scalable and efficient data storage and retrieval, addressing previous limitations.
- Incorporated a web-based terminal session feature for remote machine modifications.
- Added the capability to deploy and remotely manage host-based firewalls on Linux hosts.

# CYBER INTELLIGENCE AND SECURITY ORG. (CISO)

Project Leader

August 2021 - May 2025

- Delivered a weekly Python course to groups of 20-30 college students, covering fundamental programming concepts and basic syntax, resulting in high levels of engagement and positive feedback from attendees.
- Developed and taught a fundamentals of computer science course with C++, utilizing various teaching techniques, assessing student understanding, and fostering a positive learning environment.

### **Certifications and Achievements**

Red Hat Certified System Administrator (In Progress)

CompTIA Security+ 6Y0-601 December, 2023 VMware Certified Technical Associate August, 2023

Magnet Certified Forensics Examiner
August, 2022

AccessData Exterro ACE for FTK
August, 2022

CCDC Western Regionals 6th, 2nd 2021-2023

# **Competitions**

#### CCDC

#### Western Regional Division

February 2023

- CCDC is a national competition that provides hands-on, real-world experience in securing and defending enterprise network infrastructure and assets.
- This competition simulates the environment of a small-to-medium-sized business or organization.
- Participated and placed 2nd place in the regional qualifiers for the regional finals alongside my team.

#### **CPTC**

Regional Finals November 2022

- CPTC is a national competition that provides hands-on, real-world experience in identifying and exploiting vulnerabilities in enterprise network infrastructure and assets.
- · Placed 4th place in the regional finals.

### NATIONAL CYBER LEAGUE (NCL)

Team Game April 2022

- The challenges are designed to test participants' technical knowledge and critical thinking skills and they are aligned with industry-standard frameworks such as the NIST Cybersecurity Framework and the CompTIA Security+ exam objectives.
- Ranked 56th out of 3658 teams.