

Frank Mancia

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EDUCATION

California State University, Long Beach

Bachelor of Science in Computer Science, Minor in Cyber Security Applications

Long Beach, CA

Aug. 2019 – Dec. 2023

EXPERIENCE

Operations Team Member

Aug. 2023 – Present

Western Regional Collegiate Cyber Defense Competition

Volunteer, Remote

- Provision multiple (Ubuntu) Linux virtual machines in vCenter and Proxmox.
- Manage and troubleshoot critical services (Dovecot, Postfix, Apache, LDAP (for authentication)).
- Collaborate with Operations team to design environment for about 20 university competing teams.

Competitor - CSULB Cyber Security Club

Nov. 2022 - Feb. 2023

- Created environment topology with machines and services requires.
- Hardened Active Directory, machines, and services (principle of least privilege)
- Responded to professional red team attacks and create incident response reports.

Information Security Student Assistant

Nov. 2019 – Dec. 2023

California State University, Office of Chancellor

Part-time, Remote

- Reviewed security logs on ServiceNow and escalated issues when required.
- Managed and monitored Qualys vulnerability scanner for web applications (WAS) and servers.
- Improved asset management for servers and employee workstations in Certero and Microsoft AMS.
- Assisted employees with software upgrades and troubleshooting over Zoom and email.

PROJECTS

Real Time Chat App | *Node.js, React.js/Typescript, Terraform, AWS*

Jan. 2023 – Feb. 2023

- Developed a full-stack web application using React.js/Typescript and Socket.io to handle real time chat conversations with Node.js.
- Deployed client build to an s3 bucket and ran application on an EC2 Ubuntu machine using Terraform.
- Automated build and deployment process through GitLab CI/CD pipeline.

Rust Ransomware | *Rust, Diffie Hellman, AES*

Oct. 2023 – Jan. 2024

- Encrypts directory of files (recursively) with ChaCha20Poly1305 (AEAD algorithm).
- Generates a unique key per file and compiles a list of file name to base64 encoded key per line.
- Creates shared secret (victim's private and attacker's public) to encrypt the file with list of keys.

Campustalk (Senior Project) | *React.js, Node.js, SQL, Docker, GCP*

Feb. 2023 – Nov. 2023

- Developed API endpoint and database architecture with password hashing.
- Protected against broken access control by reviewing authentication on endpoints.
- Conducted code reviews and simple penetration tests (sqlmap, Burp Suite).
- Deployed project using Docker, Docker Compose, and Google Cloud VM.

TECHNICAL SKILLS

Languages: Python, SQL, JavaScript, HTML/CSS, Typescript, C, Bash

Applications: Microsoft Office, Zoom, ServiceNow, Qualys, Certero, GlobalProtect VPN, vCenter, Proxmox

Developer Tools: Git, Docker, Terraform, Google Cloud Platform, VS Code, Visual Studio, AWS

Penetration Testing Tools: Metasploit, Burp Suite, nmap, Feroxbuster, ffuf, Bloodhound