

Julio Rivas

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EDUCATION

University of California, San Diego
Bachelor of Science in Computer Engineering

La Jolla, CA

Expected. December, 2025

MiraCosta College
Associate in Science in Computer Science

Oceanside, CA

2020 – 2023

EXPERIENCE

ITS Service Desk Associate

April. 2023 – May. 2024

University of California, San Diego

La Jolla, CA

- Enhanced customer satisfaction by providing timely and accurate assistance with service desk inquiries.
- Collaborated with team members to solve complex technical issues, resulting in higher customer satisfaction rates.
- Effectively used existing documentation to efficiently solve user issues.
- Used ticketing systems to manage and process support actions and requests.

Math Tutor

August. 2022 – April. 2023

MiraCosta College

Oceanside, CA

- Explained math concepts in a caring and encouraging environment to help students thrive and learn.
- Supported students with helpful study habits and exam strategies.
- Used positive reinforcement, repetition and review to help students master challenging material.
- Tutored students in subjects such as Calculus I and Calculus II.

IT Support Specialist and Developer Intern

August. 2016 – October. 2018

South Dade Toyota

Homestead, FL

- Led efforts providing technical support for over 200 users.
- Developed automation scripts that streamlined the configuration process for over 100 devices, reducing configuration time by more than 50%.
- Actively contributed to system setups and installations of different operating systems.
- Laboriously configured and connected printers.
- Made efforts to maintain hardware and software with new installations and repairs.

PROJECTS

Network Routing Project: Multi-Router System: | *C, Mininet, Docker*

- Implemented a software router in a Mininet-emulated network, featuring Longest Prefix Match routing, ARP caching, and ICMP handling to support dynamic network communication.
- Developed and tested routing logic to enable ping, traceroute, and HTTP communication across a multi-router topology, ensuring robust error handling and ARP timeout mechanisms.
- Utilized Docker and VSCode for development, configuring a simulated network environment for functional verification of the routing protocol.

TCP Congestion Control with Sliding Window Protocol: | *C, Docker*

- Designed and implemented a TCP congestion control mechanism featuring AIMD, Slow Start, Fast Recovery, and Fast Retransmission to optimize data transmission efficiency and prevent network congestion.
- Developed a Sliding Window Protocol with Selective Retransmission and Cumulative ACKs to ensure reliable, in-order delivery of frames between hosts.
- Integrated CRC-8 error detection to identify and retransmit corrupted frames, ensuring message integrity.

Gen Z Work Journal: | *Javascript, HTML, CSS, GitHub*

- Collaborated with a team of 11 developers to create an innovative web app for managing daily tasks, setting goals, and engaging in creative activities.
- Developed CRUD operations for real-time thought expression, task creation, task management with timelines, and tag-based organization, using LocalStorage for storage whilst employing agile methodology.
- Utilized JUnit, and GitHub Actions CI for comprehensive testing and continuous integration

Network Inventory System: | *PHP, MySQL, phpMyAdmin*

- Designed and implemented a robust record management system to track and manage over 250 network devices, enhancing network monitoring and efficiency.
- Built a dynamic web interface for administrators to view, update, and delete device records seamlessly.
- Leveraged MySQL and phpMyAdmin to store and organize complex device data while ensuring reliability and scalability

Service Tracking | *Perl, PHP, MySQL, phpMyAdmin*

- Developed an automated car tracking system for a Toyota dealership service department, optimizing workflow and improving customer service response time.
- Integrated RFID devices to scan incoming cars and retrieve customer information from the dealership's database in real-time.
- Designed a backend system with PHP and MySQL for efficient data processing and retrieval.

TECHNICAL SKILLS

Languages: C, C++, Java, Python, phpMyAdmin, JavaScript, HTML/CSS, PHP, Perl

Frameworks: Laravel, Vue, Inertia, WordPress

Developer Tools: Git, VS Code, Visual Studio, IntelliJ