Hector Jimenez

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Experience

Nexalure Technologies (01/2024 - Present)
SOFTWARE ENGINEER *Remote*
- Built and integrated applications using React, React Native, Node.js, and Express, resolving merge conflicts and ensuring smooth client-server interaction.
- Created and optimized a component-based ordering application with Docker-based virtualization for improved performance and scalability.
- Configured and deployed scalable cloud-hosted databases, including clusters, replication, and sharding.
- Mentored junior developers in Agile methodologies, driving a 30% increase in team productivity through collaborative code reviews and pair programming sessions

IEEE Solar Car (06/2023 - 03/24)
ELECTRICAL TEAM LEAD *Riverside, CA*
- Designed and managed electrical systems for vehicle integration, coordinating tasks across battery, solar arrays, and sensors. Conducted component trade-offs for communication technologies and battery management systems.
- Worked with electrical, firmware, and mechanical teams to meet project deadlines. Organized and led workshops on circuit design, layout, and microcontroller programming to ensure cohesive team progress.

Captek Pharma (10/2020 - 09/21)
CONTROLS ENGINEER ASSOCIATE *La Mirada, CA*
- Programmed embedded firmware for PLCs, using ladder logic and SCADA. Designed and tested electronic control systems, including PLC hardware, remote I/O, VFDs, and servo systems, and integrated Cognex Vision for automated X-ray inspection.
- Supported HMI troubleshooting and control system implementations, reducing machine downtime. Applied knowledge of cGMP and electrical standards (NFPA 79, IEC 60204-1, UL508A) to ensure regulatory compliance.

Formula SAE Electric (08/2018 - 01/2019)
ELECTRICAL SYSTEMS TEAM MEMBER *Riverside, CA*
- Designed and implemented the vehicle's electrical architecture, including a custom 20kW three-phase tractive inverter. Utilized LTSpice for power and analog circuit modeling and Altium for PCB design.
- Guided team members and maintained key relationships with vendors and sponsors. Developed and deployed field-oriented control algorithms in C++ on an embedded STM32 ARM Cortex-M7.

U.S. Navy (06/2018 - 08/2018)
SOFTWARE ENGINEER INTERN *Norco, CA*
- Developed a C++ app to process and visualize server uptime data in SQL, using the C++ Standard Library and Gnuplot for real-time insights.
- Created Bash scripts to automate server data processing via SSH, collaborated with a team to replace an outdated app, and used the LAMP stack for backend and frontend development.

Education

University of California Riverside - B.S. in Electrical Engineering - Power Systems   *May 2024*
- **EE Coursework:** Embedded Systems, FPGA Project Lab, Power Electronics Lab, Signal Processing, Electromagnetics, Circuits and Electronics, Communications, Senior Design(Autonomous Robot)

Skills

Software	Altium, KiCad, LTSpice, OpenCV, Docker, Solidworks, Microsoft Azure
Languages	English/Spanish(Native), Python, Javascript, Verilog/SystemVerilog, MATLAB, C/C++