Contact

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(LinkedIn)

Top Skills

Message Queuing Telemetry
Transport (MQTT)
ESP32
Raspberry Pi

Languages

Japanese (Elementary)
Malayalam (Native or Bilingual)
English (Full Professional)

Sajesh S F

Result-Oriented Quick-Witted Technical & Organizational Leader |
Scaled Teams & Products Across US, India, Japan
Los Angeles Metropolitan Area

Summary

Engineering leader with 8+ years in embedded systems, IoT,
industrial/medical imaging, and cloud solutions. Proven record
of delivering mission-critical projects worldwide, including on-site
deployments in India, Japan, and the USA.

Experience

AMERICAN SECURITY
Head of Software Engineering
June 2024 - Present (1 year 6 months)
Los Angeles, California, United States

• Successfully coordinated the development and deployment of the next-gen
smart safes.

• Manage offshore development teams in India while closely collaborating with
the component development team in Korea and the production team in China
to ensure seamless integration and delivery.

• Ensured zero-downtime operations for the entire infrastructure stack,
embedded devices, Android/iOS mobile apps, AWS-hosted microservices,
and Windows desktop applications, all while providing real-time field support,
live diagnostics, and quick issue resolution, and coordinating directly with
stakeholders.

• Act as a key liaison between the customers, product team, and developers,
translating field insights into actionable feedback and helping align product
decisions with real-world needs.

• Led resolution of business-critical escalations, ensured security compliance,
and supported ongoing system updates and maintenance.

• Quickly learned the product domain and contributed to product strategy,
enabling more informed and effective decisions from the product team.

Travancore Analytics
6 years

Group Head - Embedded Systems
January 2023 - September 2024 (1 year 9 months)

• Partnered closely with senior management and the business team to drive a portfolio revenue of $600K, expanding the group's footprint. Initiated a new client account that scaled from $0 to $100K within one year.

• Led and managed a high-performing team of 35, including project managers, lead engineers, and developers, overseeing the design, development, and delivery of complex embedded systems across 4 active client accounts.

• Devised and implemented a project health framework with key metrics to monitor financial performance, delivery velocity, and customer satisfaction, improving transparency and predictability across programs.

• Engaged with hardware vendors and design/production teams across multiple cities in India and China, ensuring quality delivery, timely integration, and cost-effective execution.

• Successfully delivered critical projects across multiple domains, including IoT, medical imaging, data acquisition, industrial automation, and secure embedded platforms.

Senior Lead
January 2022 - December 2022 (1 year)
Thiruvananthapuram, Kerala, India

• Architected a sensor board for Mechasense, a next-generation ESP32-based HVAC controller with LTE/Wi-Fi, Raspberry Pi compatibility, and daisy-chained I2C sensor support (50+ sensors), now deployed in hundreds of installations

Lead Engineer
January 2021 - December 2021 (1 year)
Thiruvananthapuram, Kerala, India

• Led the architecture and development of NiOX2100, a Zynq-7000 SoC-based high-speed data acquisition and control system developed in-house to qualify ISRO's Solar Array Drive Assembly (SADA).

• Designed the system architecture, including a modular 13-slot motherboard that interfaces with pluggable ADC, DAC, and Digital IO cards.

• Led a 30+ member cross-functional team across mechanical design, PCB layout, firmware, FPGA, and WPF-based application development

• Oversaw and facilitated cross-domain coordination encompassing development, procurement, and manufacturing

• Spearheaded the system's 3-month qualification testing phase at the vendor facility, ensuring complete verification and validation for deployment

Senior Engineer
January 2020 - December 2020 (1 year)

• Led and mentored a team of 3 embedded and application developers, providing hands-on guidance in embedded design, software architecture, design patterns, and tools such as JIRA and Git.
• Architected and developed a prototype HVAC monitoring and control system based on the open-source HestiaPi thermostat, integrating multiple environmental sensors over I2C on a custom Raspberry Pi–compatible breakout board.
• Designed and built a .NET WPF application with MSSQL backend to manage patient data and imaging workflows for a dental imaging platform.
• Developed a DICOM-based image viewing application capable of acquiring scans directly from Ethernet-connected medical scanners.
• Created a plugin module for detecting microcalcifications in mammograms using advanced multi-stage image processing techniques.
• Collaborated directly with client representatives to gather and refine requirements and worked alongside senior software architects to ensure scalable system design and implementation

Engineer
January 2019 - December 2019 (1 year)
Kochi, Kerala, India

• Developed the firmware for the NiOX1900, a data acquisition and control system for space applications, deployed to qualify the Scan Mirror Assembly (SMA) and Filter Wheel Assembly (FWA) subsystems for ISRO, India's leading space agency.
• Collaborated with the circuit design team to gain hands-on experience with ADCs, DACs, thermistors, and monoshot timers.
• Worked on board bring-up; and resolved hardware–firmware integration issues.
• Gained in-depth expertise in SPI, Ethernet, FreeRTOS, and LwIP protocol stack implementation
• Integrated FPGA modules into the firmware stack, including custom protocol and data frame design and implementation.
• Worked on-site with the client to develop parsers for proprietary digital communication protocols.
• Coordinated and executed a 3-month system integration testing phase at the client facility.

Engineering Trainee
October 2018 - December 2018 (3 months)
Thiruvananthapuram, Kerala, India

• Learned the Qt framework and migrated a legacy internal LAN-based messenger tool to Qt 5, redesigning it with a modern GUI and improved code maintainability.

• Built and deployed the application for Windows, Linux, and Ubuntu, achieving cross-platform

• Gained hands-on experience with C++ development, cross-compilation, and UI/UX principles for enterprise desktop applications.

• Learned and applied development tools including Git, SVN, and JIRA, building knowledge in version control and project tracking.

Chordify, Inc.
Technical Solutions Consultant
January 2023 - June 2024 (1 year 6 months)
Sunnyvale, California, United States

Comco Corporation
Lead Engineer
October 2022 - December 2022 (3 months)
Nagoya, Aichi, Japan

Led the embedded software development for the new product line, Xcross-Rapid Inspection.

Bosch Rexroth
Industrial Automation Intern
June 2016 - July 2016 (2 months)

• Developed a proof-of-concept pneumatic actuator system with a closed-loop controller using PLC programming.

• Gained practical experience with pneumatic actuators, valves, and industrial sensors.

• Learned the fundamentals of hydraulics, pneumatics, and automated system control.

Education

College of Engineering, Trivandrum
Bachelor of Technology - BTech, Electrical and Electronics Engineering · (July 2014 - July 2018)

Viswabharathy Public School

Senior School, Mathematics and Computer Science · (June 2012 - March 2014)