

Hariharan

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PROFESSIONAL SUMMARY

Software Engineer experienced in building real-time backend systems using Node.js, Python, and React. Skilled in scalable middleware development for industrial automation including OPC UA/DA signal processing, MQTT communication, and camera integrations. Experienced in low-latency production systems and modern architectures including micro-frontend architecture. Currently building AI-powered systems including LLM architectures, RAG pipelines, MCP servers, automation workflows, and AI agents.

EXPERIENCE

• Software Engineer

Feb 2025 - Present

Backend & Real-Time Systems

Neptune Controls Pvt. Limited, Bengaluru

- Developing and maintaining real-time, backend-driven applications using Node.js, Python, and React.
- Designed and implemented scalable middleware services to process OPC UA/DA industrial signals with high reliability.
- Integrated external systems and camera platforms using REST APIs for real-time monitoring applications.
- Built MQTT-based data pipelines for sensor data ingestion and real-time event processing.
- Delivered low-latency, fault-tolerant solutions deployed in production security and industrial environments.

• Frontend Development Intern

Nov 2024 - Feb 2025

Next.js & SaaS Development

Spectravach Pvt. Limited

- Designed and developed the official company website using Next.js with a strong focus on SEO and performance optimization.
- Built and optimized a SaaS application with emphasis on scalability, state management, and responsive UI design.

PROJECTS

• Real-Time OPC Middleware & Camera Integration

Neptune Controls Pvt. Limited

- Built scalable real-time middleware to capture and process OPC UA/DA signals from BMRCL systems.
- Built event-driven Node.js services integrating OPC signals with Honeywell MAXPRO cameras.
- Ensured low-latency, fault-tolerant communication across test and production environments.

• Real-Time Intrusion Detection System

Neptune Controls Pvt. Limited

- Developed an MQTT-based system to monitor real-time sensor signals and detect security events.
- Implemented sensor-to-camera mapping to automatically trigger live camera feeds on intrusion.
- Deployed in a live production environment at Maldives Airport for real-time intrusion detection..

• jwt-timeline — npm Package

Open Source Project

- Developed and published an npm package to visualize and analyze JWT token timelines including issued, expiry, and validity periods.
- Helps developers debug authentication flows by converting JWT timestamps into human-readable timelines.
- Designed as a lightweight developer utility for Node.js applications.
- npm: [npmjs.com/package/jwt-timeline](https://www.npmjs.com/package/jwt-timeline)

TECHNICAL SKILLS

Languages: JavaScript, Python, SQL , Java(Basics)
Backend: Node.js, Express.js, REST APIs, WebSockets, Event-Driven Systems
Frontend: React.js, Next.js, Tailwind CSS, ShadCN, Basic Angular

Real-Time Systems: OPC UA/DA, MQTT
Databases: MongoDB, Oracle, SQL Server
Cloud & DevOps: Docker, AWS, Azure Blob Storage,AWS Lambda
Tools: Git, GitHub, Postman, SSMS, VS Code

EDUCATION

• Bachelor of Engineering — Computer and Communication Engineering (CGPA: 8.3)

2020 – 2024

Chennai, India

Panimalar Engineering College