JAYASURYA T APPU

Senior Backend Engineer (Node.js)
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PROFESSIONAL SUMMARY

Senior Backend Engineer with 4+ years building production Node.js/TypeScript systems: REST APIs, event-driven pipelines (RabbitMQ, Redis Streams), auth and RBAC, payment integrations and RAG/LLM services. Scaled services to **~1,000 req/sec**, cut API latency by **30–50%** and automated payroll for **~200 employees**. Two years mentoring engineers.

TECHNICAL SKILLS

Languages: JavaScript (ES6+), TypeScript, Python, SQL, C
Backend: Node.js, Express.js, FastAPI, REST APIs, gRPC, Authentication, RBAC, Session Management, FSM Workflows
Messaging: RabbitMQ, Redis Streams, Background Workers, Event-Driven Architecture, Kafka (projects)
Databases: MongoDB, MySQL, Redis, ChromaDB (vector)
Cloud & DevOps: AWS (EC2), GCP, Docker, Docker Compose, Nginx, Linux, Git
AI / LLM: RAG, Vector Embeddings, Sentence Transformers, Ollama (local LLMs)
Frontend: React.js, Angular, HTML5, CSS3
Practices: System Design, Microservices, API Design, Clean Architecture, Performance Tuning, Code Reviews, Mentoring

PROFESSIONAL EXPERIENCE

Senior Software Engineer (Backend) — Spericorn Technology Inc | Trivandrum | Aug 2026 – Present

- Building and scaling Node.js/TypeScript services, owning system design, API architecture and production performance.

Software Engineer — Carclenx (Pexa) | Attingal | Jul 2025 – Aug 2026

- Built Node.js REST APIs for production web and mobile apps, sustaining **~1,000 requests/sec**.
- Designed an event-driven partner payout system on RabbitMQ, triggering payouts asynchronously on order completion.
- Built payroll automation for **~200 employees**, reducing manual HR effort by **~70–80%**.
- Moved long-running jobs out of the request cycle with Redis Streams pipelines and background workers.
- Cut API response times by **30–50%** via Redis caching and MongoDB tuning (indexes, aggregations, pagination, geo queries).
- Built a Worker & Staff Analytics module with task allocation, contributing to an **~80% drop** in service cancellations.
- Implemented authentication, session management and RBAC; built FSM-driven workflows with payment and messaging integrations, retries and fault-tolerant error handling.
- Defined API contracts with the team and reviewed backend architecture using Clean Architecture principles.

Software Developer — Cordova Educational Solutions | Thiruvananthapuram | Oct 2024 – Jun 2025

- Built backend services and REST APIs for an LMS in Node.js, with Angular and React.js modules, auth flows and API integrations.
- Refactored tightly coupled legacy modules into reusable components, improving performance by **~20–40%**.
- Turned stakeholder requirements into production features and resolved production issues via root cause analysis.

Junior Software Engineer & Technical Mentor — Quest Innovative Solutions | Trivandrum | Dec 2022 – Sep 2024

- Built Node.js/Express.js REST APIs and React.js interfaces for multiple client apps, including booking systems.
- Integrated third-party APIs and optimized relational database queries for performance and data consistency.
- Mentored trainees in web development and data science through hands-on projects, technical sessions and code reviews.

Software Developer (Full Stack) — Carclenx (Pexa) | Attingal | Jan 2022 – Jun 2022

- Built RESTful APIs with Node.js/Express.js, integrated third-party services and built Angular admin dashboards.

PROJECTS

PrivateRAG: Multi-Tenant RAG Platform | Node.js, FastAPI, ChromaDB, Mistral (Ollama), Docker | GitHub

- Document Q&A with strict per-user data isolation (user-scoped embeddings, identity-filtered retrieval) and a local LLM.

Microservices E-commerce Backend | Node.js, gRPC, Kafka, Redis, MongoDB, Docker, Nginx | GitHub

- Independently deployable services over gRPC with Kafka events, Redis caching and Nginx; deployed on GCP.

Forge: Build System for C | C, GCC | GitHub

- CLI build tool written from scratch: scans C projects, generates a build plan, compiles and links executables.

EDUCATION

B.Tech, Computer Science & Engineering — MG College of Engineering | 2017 – 2021 (not completed)