

JAYASURYA T APPU

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Professional Summary

Backend-focused Software Engineer with nearly 4 years of experience developing REST APIs, backend services, and AI-powered applications using Node.js, Python, Express.js, and FastAPI. Experienced in building and maintaining production applications, optimizing backend performance, implementing authentication workflows, and developing scalable API-driven systems. Skilled in SQL/NoSQL databases, Docker-based deployments, GCP, and AI integrations including Retrieval-Augmented Generation (RAG), vector embeddings, and LLM-based workflows. Comfortable working in fast-paced startup environments and collaborating across teams to deliver reliable and maintainable software solutions.

Experience

Carclenx (Pexa) - Software Engineer (July 2025 - Present)

- Collaborate with mobile application teams to build and maintain APIs focused on **reliability, performance, and version compatibility**.
- **Architected and scaled** high-performance REST APIs using Node.js and Express.js for real-time platforms, successfully supporting production traffic volumes of **~1000 requests/sec**.
- **Engineered a custom Worker & Staff Analytics module**, optimizing task allocation logic and directly reducing service cancellations by **80%**.
- **Designed a distributed payroll system** and implemented robust authentication workflows for admin platforms, reducing manual HR workload by **70-80%**.
- **Optimized complex database queries** and streamlined backend logic, slashing API response times by **30-50%** to ensure seamless, version-compatible integration with mobile application teams.
- Participate in architectural discussions and maintain **code quality through Git-based workflows and peer reviews**.

Cordova Educational Solutions — Software Developer (Oct 2024 – June 2025)

- Developed and maintained backend APIs and frontend modules for an **LMS (Learning Management System)** platform using Node.js and Angular.
- Built new REST API endpoints and UI features to support internal workflows and user-facing functionality.
- Debugged production issues and optimized backend logic and frontend performance to improve application reliability and **responsiveness**.
- Worked on authentication flows, API integrations, and feature enhancements for production applications.
- Collaborated with team members to implement new features, fix bugs, and maintain stable application releases.

Quest Innovative Solution - Junior Software Engineer (Dec 2022 - Sept 2024)

- Developed **responsive web applications and backend services** using **React.js, Angular, Django, and Node.js**, delivering scalable solutions across multiple client projects.
- Designed and implemented **20+ REST APIs** that improved backend data handling efficiency and reduced response times for production applications.
- Implemented **business logic and backend integrations** using **Python and Node.js**, supporting data processing and application workflows.
- Collaborated with **cross-functional teams including designers and product stakeholders** to gather requirements and translate them into technical solutions.

- Assisted in **debugging, testing, and deployment** of applications, ensuring stable releases and maintaining application reliability.

Carclenx (Pexa) - Full Stack Developer (Jan 2022 - June 2022)

- Developed responsive admin dashboards using Angular and integrated frontend components with backend APIs.
- Built RESTful APIs using Node.js and Express.js for internal application features
- Integrated third-party APIs and external services to extend application functionality.
- Ensured smooth frontend–backend communication and reliable user experiences.

Technical Skills

- **Programming Languages** : JavaScript, HTML, CSS, Python.
- **Back End Technologies** : Node.js, Express.js , FastAPI.
- **Front End Technologies** : React.js, Next.js.
- **Data Base Technologies** : MongoDB, SQL, ChromaDB, Redis.
- **Tools & Platforms**: Git, Docker, Cursor, Postman, GCP.
- **AI & GenAI Technologies** : Retrieval-Augmented Generation (RAG), LLM Integrations, Vector Embeddings, SentenceTransformers
- **Core Skills** : Microservices, REST APIs, gRPC, System Design.

Projects

AI Chat System with RAG (Retrieval-Augmented Generation)

- Built a RAG-based backend system using FastAPI, ChromaDB, and SentenceTransformers for semantic search.
- Implemented vector embeddings and retrieval pipelines to enable context-aware responses.
- Integrated a local LLM (Mistral) for generating intelligent answers based on retrieved data.
- Designed a pipeline for document ingestion (PDF → embeddings → query → response).
- Structured the system for scalable AI-assisted querying and backend extensibility.

Microservices E-commerce Backend System

- Built a microservices-based backend architecture with gRPC communication and service isolation.
- Implemented event-driven workflows using Kafka for asynchronous service interaction and scalable processing.
- Integrated Redis caching to reduce database load and improve API performance under high traffic
- Containerized services using Docker and orchestrated them with Docker Compose for consistent deployments
- Configured Nginx as a reverse proxy/API gateway for routing, load balancing, and request handling
- Designed the system for scalability, fault tolerance, and production readiness
- Tech Stack: Node.js, Express.js, Kafka, Redis, gRPC, Docker, Nginx

Education

Bachelor of Technology (BTech) – Computer Science and Engineering : 2017 – 2021
Coursework completed (did not graduate)

Socials

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Website : www.jayasuryawebdev.com **Gmail** : jayasuryawebdev@gmail.com