

Akash Kharat

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EXPERIENCE

Software Engineer

Ksolves India PVT LTD

Aug. 2021 – Current

Pune, India

- Spearheaded Legacy Migration: Led the full-stack modernization of legacy PHP and Node.js monoliths to a scalable NestJS and Next.js architecture, significantly improving code maintainability and system performance.
- Microservices & IoT Architecture: Designed and deployed resilient Microservices solutions with Tuya IoT integrations, enabling real-time data processing and seamless device communication.
- High-Performance Backend Development: Developed robust RESTful APIs using Node.js (Express) and PostgreSQL (Sequelize ORM), optimizing database schemas to handle high-volume traffic efficiently.
- Cloud & DevOps Engineering: Orchestrated containerized application deployments using Docker and managed serverless infrastructure on AWS, ensuring 99.9% uptime and reproducible environments.
- Full-Stack Implementation: Built dynamic, responsive web interfaces using React.js and Redux within the MERN/PERN stack, ensuring a seamless user experience across devices.

PROJECTS

Smart Hotel PMS Modernization & IoT Integration | *NestJS, Next.js, Tuya IoT, Redis*

- Led the architectural migration of a legacy monolithic PHP/Node.js codebase to a scalable **NestJS Microservices** architecture.
- Integrated **Tuya IoT OpenAPI** and **MQTT** protocols to enable real-time automation of room scenes (lights, HVAC, locks) based on guest check-in status.
- Architected and optimized the MySQL database schema to handle high-frequency IoT device logs, improving system query response time by **25%**.
- Developed a real-time administrative dashboard using **Next.js** and **Tailwind CSS** for monitoring device health and room environments.

Multi-Tenant SaaS CRM Platform | *Node.js, React.js, PostgreSQL, TypeScript*

- Engineered a **Multi-tenant Microservices** system with strict data isolation, allowing tenants to customize configurations without affecting other users.
- Implemented dynamic **Localization modules**, enabling tenants to define locale-specific UI languages and feature sets.
- Created reusable utility functions and optimized API layers to support scaling for multiple concurrent enterprise clients, while conducting code reviews for the team.

Role-Based Lead Management System | *Docker, AWS, Twilio, SendGrid, FCM*

- Developed a centralized communication hub integrating **Twilio** (SMS) and **SendGrid** (Email) to streamline salesperson-lead interactions.
- Orchestrated containerization using **Docker** images, ensuring consistent deployment environments across development and production clusters.
- Implemented **FCM (Firebase Cloud Messaging)** to deliver real-time push notifications to web and mobile users for critical updates.
- Utilized **Sequelize ORM** for efficient database management and complex query optimization.

TECHNICAL SKILLS

Languages: Node.js, TypeScript, JavaScript (ES6+), SQL, HTML/CSS

Frameworks: NestJS, Express.js, React.js, Next.js, Redux

Tools & Cloud: Docker, AWS, Git, Swagger, Tuya Cloud Platform, MQTT, Webhooks

Databases: PostgreSQL, MySQL, MongoDB, Redis

EDUCATION

DBATU University

Bachelor of Technology in Computer Science

Satara, India

2018 – 2021

MSBTE Board

Diploma in Computer Engineering

Satara, India

2014 – 2018