

# Sai Manikanta Karnati

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**Summary** — Software Engineer with 4+ years of experience in full-stack development and cloud-based systems. Skilled in **Vue.js** to build **responsive frontends** and **Node.js, Spring Boot** to develop **efficient backend systems**. Experience in using **AWS** (EC2, S3, Lambda) to deploy and manage applications. Proficient in designing **RESTful APIs, RPC's** and using **Docker** for containerization to streamline deployments. Passionate about solving technical challenges and providing **scalable, maintainable** and user-focused solutions.

## Experience

### Fully In Control B.V.

12/2023 – Current

#### Software Engineer

- Optimized front-end performance through the implementation of **caching techniques, reducing database calls by 20%** and improving page load times.
- Enhanced core functionalities, resulting in a **15% increase in sales** and a 20% boost in user satisfaction (based on customer feedback surveys).
- **Engineered a collaborative feature** that increased customer engagement, leading to a 10% growth in active users.
- Developed a **real-time chat system and collaborative questionnaire answering feature** using the Meteor Pub-Sub Model and Node.js, resulting in a 15% increase in user engagement.
- Developed full-stack applications using **Vue.js, Node.js, and Express.js**, to improve UI responsiveness by 30%.
- Migrated a legacy **Angular-based application** to **Vue.js**, improved performance and reducing maintenance overhead.
- Designed **RESTful APIs and microservices**, enhancing application modularity and scalability.
- Optimized **MongoDB queries through indexing and aggregation pipelines**, improved performance by 20%.
- Built **component-based UI architecture in Vue.js**, improving front-end scalability and maintainability.
- Integrated third-party APIs to expand application functionality and improve user experience.
- Developed and maintained microservices using Spring Boot and Spring Cloud to support high-performance applications with minimal downtime.
- Built and deployed scalable RESTful APIs for communication between frontend applications, databases, and external services. Reduced load times by 25% through server-side caching techniques.
- Designed and **implemented interactive dashboards** using amCharts. Created real-time data visualizations to provide actionable insights, improving decision-making for end-users.
- Designed and implemented a **real-time notification system using Kafka**, reducing user notification latency by 70% and enhancing user engagement.
- Led the migration of a monolithic legacy system to a microservices architecture, improving scalability and maintainability.
- Applied **Redis-based caching strategies** for both read-through and write-through caches, ensuring that frequently requested data is served with low latency while maintaining data consistency.
- Introduced **Redis Queue for background job processing**, enabling asynchronous execution of time-consuming tasks like email delivery, report generation, and heavy processing tasks, which improved system responsiveness by 50
- **Deployed AWS Lambda functions using Terraform scripts**, automating infrastructure provisioning and improving deployment efficiency.
- Implemented scalable cloud solutions on AWS, leveraging EC2, Lambda, S3, IAM, and CloudWatch.
- **Introduced Playwright for test automation**, cutting down application bugs by 45%, improving release cycle efficiency, and reducing manual testing time by 30%.

### Xebia

08/2022 – 12/2023

#### Associate Software Engineer

- Optimized MongoDB queries with indexing and **MongoDB Atlas Search, improving data retrieval speed by 15%** and reducing server load by 10%.
- **Migrated monolithic applications to microservices architecture**, improving system performance by 15%.
- Re-architected features using **Pub-Sub models**, boosting application performance by 20% and improving UI responsiveness.

- Applied **Design Patterns to streamline feature development**, reducing delivery time by 10% and improving code maintainability.
- Implemented **JWT-based authentication** for secure API access and user management.
- Improved database performance and reduced downtime by 5% through targeted query optimizations and performance tuning. item Designed and implemented transactions using Spring's @Transactional annotation to ensure data consistency and rollback behavior in case of failures.
- Optimized database queries and reduced latency by implementing Redis caching with Spring Data Redis for frequently accessed data.
- Leveraged Spring Boot Actuator for application monitoring and management, providing health checks, metrics, and application insights using Prometheus and Grafana.

**Xebia**

**05/2021 – 07/2022**

*Engineer Trainee*

- Contributed to the development of a banking application, collaborating with a team of 4 developers and completing the project 2 weeks ahead of schedule.
- Worked on implementing key features using React.js (frontend) and Java (backend), improving the application's functionality and user experience.
- **Implemented Redux for state management**, ensuring consistent and predictable application state across components.
- **Created custom hooks** to encapsulate reusable logic, improve code maintainability and reduce redundancy.
- Applied **lazy loading and code-splitting techniques** in React.js, improving front-end performance.
- Integrated **Spring Security** for authentication and authorization, ensuring secure access to application resources.
- Used **Spring Data JPA** for database interactions, reducing boilerplate code and improving efficiency.
- Integrated **Spring MVC** for handling HTTP requests and rendering views, ensuring seamless front-end-to-back-end communication.
- Enhanced user experience by implementing **form validation and error handling in React.js**.

## Education

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**University Of North Carolina At Charlotte**

*Master of Science in Computer Science*

## Certifications

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- **AWS - AWS Certified Developer Associate**
- **MongoDB - MongoDB Certified Developer**
- **Infosys - Infosys Certified Software Programmer**
- **Java - NPTEL certified Java Developer**
- **AWS - AWS Academy Graduate - AWS Academy Data Engineering**

## Skills

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**Frontend:** Vue.js, React.js, Angular, HTML, CSS, Material UI, Tailwind CSS, SAP UI5

**Backend:** Node.js, Express.js, RESTful APIs, Meteor JS, Firebase, Spring Boot, Spring MVC, Spring Security

**Databases:** MySQL, MongoDB

**Languages:** Javascript, Java, Python

**DevOps:** Docker, Kubernetes, Terraform

**Automation:** Playwright

**Tools:** Git, BitBucket, JIRA, Confluence, Postman

**Methodologies:** Agile, Scrum, Microservices Architecture

**Cloud:** AWS

**Other:** Kafka