

MUTHU V

Full Stack Developer | MERN Stack | Front End Development React

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Professional Summary

Results-driven Full Stack Developer with 3+ years of hands-on experience architecting and delivering MERN stack solutions in production environments. Proficient in building scalable React.js frontends with complex state management, designing robust Node.js/TypeScript REST APIs with secure JWT authentication and RBAC, and managing both MongoDB and MySQL databases. Experienced working in Agile/Confluence-driven teams, with a strong focus on code quality, performance optimisation, and client-facing delivery. Keen interest in integrating AI- driven features into modern web applications.

Professional Experience

Software Engineer, *Web Design Magics*

03/2024 – Present

Project : WeConnect 2.0 - LightHouse Community Foundation

- Translated Figma designs pixel-perfectly into a responsive React.js application serving three distinct user roles - youth management portal, admin dashboard, and staff dashboards for a non-profit client.
- Architected dynamic, role-aware data tables with multi-column sorting, filtering, and server- side pagination using Zustand for state management and Axios for REST API integration, streamlining field staff workflows.
- Integrated REST API endpoints across youth profiles, activity tracking, and reporting modules; centralised Axios interceptors for automatic auth token injection and consistent error handling across all requests.
- Optimised frontend performance using React.memo, selective Zustand subscriptions, and lazy-loaded route components, delivering a fast, responsive experience on low-bandwidth field devices.
- Maintained high Figma-to-code fidelity across all user roles through rapid iteration cycles with direct client feedback, consistently meeting milestone deadlines.

Technology : React.js, Zustand, Axios, Shaden UI, Vitest, REST API

Project : Construction ERP System

- Architected a production-grade Node.js / TypeScript REST API with 50+ endpoints across 4 user roles, covering attendance, CRM, material procurement, site management, and financial modules from the ground up.
- Applied clean architecture patterns (Route → Controller → Service → Repository) with Zod schema validation, centralised AppError handling, and consistent JSON response envelopes for maintainability and scalability.
- Designed a secure JWT authentication system with 15-minute access tokens, 7-day refresh token rotation, a race-condition-safe parallel refresh queue, and granular RBAC middleware for role-gated endpoint access.
- Built GPS-verified attendance tracking using Haversine geofencing, Multer selfie capture, and IST-aware MySQL date queries - eliminating timezone table dependencies and ensuring accurate field attendance records.

- Engineered a full material procurement workflow (MRN→PO → delivery inventory) with audit trail and state machine; built a financial reconciliation engine with partial payment tracking, overdue cron jobs, and P&L / GST report generation via PDFKit.
- Deployed to Render with Railway MySQL 8.0, configuring SSL, environment variables, CORS whitelisting, and a tsc → migrate → seed pipeline for repeatable production deployments.

Technology : **Node.js, Express.js, Sequelize, MySQL, JWT, Zod, Render**

Junior Software Engineer, Web Design Magics

03/2023 – 02/2024

Project : Home Care Application

- Built a service marketplace platform connecting homeowners with verified service professionals, delivering a seamless end-to-end booking experience with third-party payment, SMS notification, and geo-location API integrations.
- Achieved an 80% reduction in page load time through strategic code-splitting, route-level lazy loading, and Zustand API response caching, dramatically improving user retention and engagement metrics.
- Implemented automated Jest test suites for critical business workflows, resulting in a 20% reduction in bug reports and significantly improving release confidence and code quality.

Technology : React.js, Zustand, Tailwind CSS, Shadcn UI.

Technical Skills

Frontend

React.js JavaScript (ES6+) TypeScript HTML5 CSS3
Shadcn UI Material UI Tailwind CSS

Backend

Node.js Express.js REST APIs JWT Authentication
RBAC Middleware Zod Validation Mongoose ODM
Sequelize ORM

Testing

Jest Vitest Postman

State Management

Zustand Redux

Databases

MongoDB MySQL 8.0 Railway (cloud DB)

DevOps & Tools

Git Docker (basics) Render Nginx Confluence Plane
Python (Flask) Java (Spring Boot)

Key Accomplishments

- Reduced page load time by 80% on a production React application through code-splitting, lazy loading, and intelligent state caching.
- Reduced bug reports by 20% by introducing Jest automated testing suites across critical business features.
- Delivered pixel-perfect, Figma-to-React UI across a multi-role non-profit platform with zero design-to-implementation defects reported by the client.
- Designed and deployed a 50+ endpoint production REST API from scratch covering 5 enterprise modules - as a junior engineer.
- Built a race-condition-safe JWT refresh token system, ensuring secure and seamless session management under concurrent user load.

Education

B.E. Electrical & Electronics Engineering,

Vellore, TN

Thanthai Periyar Government Institute of Technology, Vellore, TN

CGPA: 7.8