

# MOHAMED NASSAAR M

## Backend Developer | Full Stack Developer

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[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

UAE Visit Visa | Valid Until: 12-Oct-2026 | Immediate Joiner | Open to GCC Relocation



## PROFILE SUMMARY

**Backend Developer** with around **4 years of professional experience** designing and delivering scalable backend systems using **Node.js, Express.js, and PostgreSQL**. Proficient in **REST and GraphQL API development, JWT authentication, microservices, Redis caching, RabbitMQ, real-time TCP/IP communication, and IoT integration**. Experienced in **React.js** for building responsive frontends, with a strong focus on **clean code, system reliability, and Agile delivery**.

## TECHNICAL SKILLS

- **Programming Languages:** JavaScript (ES6+), TypeScript
- **Backend Technologies:** Node.js, Express.js, GraphQL, REST APIs, Socket.IO, TCP/IP, SerialPort, Modbus CRC16, Binary Protocol Engineering, Microservices, Cron Jobs
- **Frontend Technologies:** React.js, Hooks (useState, useEffect, Custom Hooks), Context API, React Router, HTML5, CSS3, Bootstrap 5, Material UI, Axios
- **Databases:** PostgreSQL, MySQL, MongoDB, SQLite3, Sequelize ORM
- **Caching & Messaging :** Redis, RabbitMQ
- **Security:** JWT Authentication, Bcrypt, CORS, Role-Based Access Control (RBAC)
- **Devops & Tools:** Git, GitHub, Docker, PM2, AWS (Fundamentals), Postman, Winston, Jest
- **Methodologies :** Agile (Scrum), Microservices Architecture, Event-Driven Design, IoT Systems

## PROFESSIONAL EXPERIENCE

### Software Engineer

**Signals & Systems (India) Private Limited** - Chennai, Tamil Nadu

A private limited **product based** company

- Identified and resolved critical performance bottlenecks in **REST and GraphQL APIs** through query restructuring and targeted **database indexing**, reducing response time by **~40%** under peak load.
- Designed and enforced **JWT-based role authentication and custom middleware**, reducing unauthorized access incidents by **~70%** across production endpoints.
- Refactored **Cron-based job schedulers and error-handling pipelines** with structured logging using **Winston** and retry logic, eliminating silent failures in time-sensitive background processes.
- Delivered **full-stack feature releases** across **Agile sprints**, collaborating with developers and project leads to deliver features on schedule.

## PROJECTS

### ➤ Smart Calibration System – IoT Energy Meter Test Bench

Built an **industrial IoT backend system** for real-time remote calibration of energy meters using **TCP/IP and Serial communication**.

- Built a **dual-server system** using raw TCP and **Express.js/Socket.IO** to handle multiple energy meter connections and stream live calibration data to the frontend.
- Engineered a **custom binary frame parser** using Node.js Buffer APIs to process voltage, current, gain, and phase calibration data with **IEEE 754 float-to-hex conversion** and **Modbus CRC16 validation**.
- Designed **CRUD REST APIs** for test parameters using SQLite3, with **PM2-powered remote restart** and dynamic IP management for device configuration.
- Implemented reliable **real-time device communication**, validation, and error handling for industrial calibration workflows.

**Stack:** Node.js, Express.js, Socket.IO, TCP/IP, SerialPort, Modbus CRC16, Binary Protocol, IEEE 754, SQLite3, REST APIs, PM2

## ➤ ERP Platform – Project Management & Inventory System

Built an **ERP-style backend platform** combining project management and multi-variant inventory management with secure APIs, caching, messaging, and transaction-based workflows.

- Designed **REST and GraphQL APIs** for complex project hierarchies including **projects, task groups, tasks, subtasks, and issues**.
- Implemented **Redis caching** for high-frequency read operations and **RabbitMQ** for asynchronous activity logging and background processing.
- Designed normalized **PostgreSQL schemas** for hierarchical project data and multi-variant inventory structures with proper **referential integrity**.
- Applied **PostgreSQL ACID transactions** to maintain data consistency and prevent partial updates during inventory movements.
- Implemented **JWT authentication and RBAC** for secure multi-user access across project and inventory modules.
- Automated **deadline reminders and overdue notifications** using **Cron Jobs**.

**Stack:** Node.js, Express.js, GraphQL, PostgreSQL, Redis, RabbitMQ, Microservices, JWT, Sequelize ORM, Cron Jobs, REST APIs

## EDUCATION

Bachelor Of Engineering (Computer Science) - Keelakarai, Ramanathapuram, Tamil Nadu  
Mohamed Sathak Engineering College  
CGPA - 7.9

Aug 2018 - Jul 2022

## ACHIEVEMENTS & CERTIFICATIONS

- [Back End Development and APIs](#)  
Certification focused on back end development, including API creation.
- [Legacy JavaScript Algorithms and Data Structures](#)  
Certification covering fundamental JavaScript algorithms and data structures.

## LANGUAGES

- **English:** Professional
- **Arabic:** Basic
- **Hindi:** Conversational
- **Urdu:** Conversational
- **Tamil:** Native