

# Waleed Mahmood

Senior Software Engineer | AI Integration Specialist | Full Stack Developer

📍 Lahore, Pakistan

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## Professional Summary

**Senior Full Stack Developer and Software Engineer** with 4+ years of experience building scalable web and mobile applications using **React.js, Node.js, React Native, and cloud deployment tools**. Experienced in **AI integrations, AI chat-bots, agentic tool calling, widgets, enterprise systems, government platforms, and medical data processing**, with a strong track record in **API integrations, microservices, performance optimization, and high quality software delivery**. Proven ability to work effectively with remote teams and clients **across the world** on complex products.

## Technical Skills

- **Languages** JavaScript, TypeScript, Python, HTML, CSS, SCSS, SQL
- **AI & Data** RAG Pipelines, Vector Search, Agentic tool calling, LLM Integration (OpenAI, Groq), Voice AI (Cartesia), AI Integration, CSV Parsing, Medical Reports, Data Analysis
- **Full Stack** React, Next.js, Node.js, Express.js, NestJS, FastAPI, React Native, Ionic, TanStack Query/Router, Zustand, Redux, RESTful APIs, GraphQL, Socket.io, WebRTC
- **Database & Cloud** MongoDB, Supabase, PostgreSQL, Qdrant (Vector DB), Sequelize, Prisma, Firebase, AWS, Docker, Git
- **Testing** E2E Testing, Jest, Mocha, JavaScript Testing
- **Specialized** Multi-Tenant SaaS Architecture, RBAC & JWT Authentication, Government Systems, GPS Integration, Fleet Management, Payment Integration, Real-time Communication, Server Events

## Deployment

**AWS:** Hands-on with 9 core AWS deployment services: Lightsail, EC2, Elastic Beanstalk, ECS, Lambda, CodeBuild, CodeDeploy, CodePipeline, and CloudFormation/CDK for build, release, and infrastructure provisioning.

**DigitalOcean:** Implemented Blue/Green deployments to support low-downtime releases and fast rollback during production rollouts.

**Platform & Delivery:** Deployed full-stack applications on Vercel and cloud infrastructure with focus on reliability, performance, and secure configuration.

## Key Projects

- **NJ School Bus Management:** Government-level application managing 300+ vehicles, 18K+ students with GPS tracking, automated payroll, and compliance reporting.
- **Rabel.co Platform:** Content monetization marketplace with 90/10 revenue split, Stripe integration serving 500+ creators globally.
- **AI Tube:** AI-powered video generation platform with prompt-to-video workflow, dynamic model selection, and credit-based monetization.
- **Real-time Communication:** Socket.io chat systems supporting 1K+ concurrent users with WebRTC video calling integration.
- **Multi-Tenant AI Widget Platform:** RAG-powered chat platform on FastAPI with per-tenant document isolation via Qdrant vector search and OpenAI embeddings, plus RBAC/JWT super-admin – admin – widget architecture.

## Professional Experience

### Senior Software Engineer

Enxsys — Lahore, Pakistan (Hybrid) | March 2023 - Present

- Led the team of 4 developers to develop, and deployment of scalable AI-powered full-stack applications.
- Developed AI-Tube, an AI-powered video generation platform that creates videos through prompt-based input using multiple LLM integrations.
- Implemented dynamic LLM selection logic, allowing users to generate videos with different models based on quality, speed, and budget requirements.
- Built a FastAPI-based multi-tenant widget platform with a RAG pipeline (chunking, OpenAI embeddings, Qdrant vector search) and RBAC/JWT authentication across super-admin, admin, and widget roles.
- Worked on secure payment and credit tracking mechanisms aligned with client-provided monetization rules. Implemented and maintained JavaScript test coverage using E2E test cases, Jest, and Mocha to improve release confidence and reduce regressions.
- Built microservices architecture using Node.js and Docker. Launched Rabel.co content creator platform serving 500+ creators.
- Integrated WebSocket chat and video systems using Socket.io and WebRTC. Implemented Stripe payment systems processing.
- Set up CI/CD pipelines reducing deployment time from 1 hours to 15 minutes.

## **Full Stack Developer (Remote)**

RapidZapp – USA Based IT Agency | Oct 2024 – July 2025

Outsourced by Enxsys

- Built NJ School Bus Management system for New Jersey state operations. Used Express Zod API framework for validation of the API endpoints.
- Git Lab CI/CD pipelines for deployment of the application. Implemented GPS tracking and route optimization for 300+ vehicles.
- Designed scheduling systems serving 18K+ students with parent notifications. Automated payroll calculations for 800+ drivers and aides.

## **Software Engineer (Mobile Application Developer)**

TriCloud Technologies — Lahore | July 2022 – March 2023

- Created apps that run seamlessly on both iOS and Android platforms. Developed apps from scratch using design mockups.
- Added features or improved existing apps. Wrote unit tests and integrated API.
- Created AR-based interior design app using React Native and ARCore. Built offline-first mobile app with synchronization features.
- Added features like push notifications and QR & bar-code scanners to provide timely and relevant updates to users and enable quick access to content and information according to client requirements.

## **Education**

### **Bachelor of Computer Science**

COMSATS Institute of Information Technology | 2018 - March 2022

### **Intermediate in Mathematics**

Punjab College | 2016 - January 2018

## **Key Achievements**

- Led government-level NJ School Bus Management system managing 300+ vehicles and 18K+ students. Launched Rabel.co platform serving 500+ creators.
- Designed microservices architecture supporting 12K+ concurrent users. Built AI-powered medical analytics processing 25K+ records daily.
- Implemented CI/CD pipelines reducing deployment time significantly.
- Making a dynamic AI-bot widget with RAG and tool calling.