# Muhammad Saif

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## Professional Summary

Full Stack Software Engineer specializing in scalable SaaS applications, enterprise software and healthcare systems using Laravel, Next.js, TypeScript, Django and PostgreSQL. Experienced in building real-time systems, secure authentication flows and AI-powered web platforms. Passionate about performance optimization and clean architecture.

## Work Experience

**Associate Engineer | MKS Solutions | Hyderabad, Pakistan | 2026**

- Led full-stack development of a Hospital Management System (Laravel + React Native) covering IPD, appointment booking and role management, reducing manual admin workflows.
- Built a GPS and biometric attendance verification system and mobile app (Expo/React Native), cutting attendance fraud and manual correction cases across multi-office deployments.
- Deployed and maintained AWS infrastructure (Elastic Beanstalk, RDS, EC2), resolving deploy-blocking issues and maintaining 99.9% uptime for a production polyclinic system.
- Improved backend data integrity for attendance records via PostgreSQL/Prisma, reducing data-related support tickets through secure password hashing and pm2-managed services.

**Backend Python Developer | ATechSquare | Remote | 2025**

- Improved real-time backend functionality for scalable attendance and whiteboard modules, handling multiple concurrent users with Django Channels and WebSockets.
- Reduced authentication-related failures by implementing secure login flows with Django REST Framework, increasing account security by ~15%.
- Enhanced system reliability under load by integrating Celery with Redis for background task processing, improving API response times.
- Automated scheduling and transaction workflows by integrating Google Calendar and payment gateways, cutting manual effort by 30%.
- Simplified permission management and reduced unauthorized access through role-based access control (RBAC).

**Web Developer | NextGenLearners | Remote | 2024**

- Contributed to production-ready web applications focused on stability and usability.
- Improved development efficiency through structured workflows and reusable patterns.
- Aligned development tasks with business and client requirements.

## Projects

**Hospital Management System | MKS Solutions | In Production** | Laravel 10, MySQL, React Native, AWS EC2, Nginx

- Sole developer of a unified system for patients, billing, laboratory and inpatient care at a live polyclinic, replacing separate tools.
- Built department and role management plus an inpatient flow from admission to discharge: beds, accruing charges, surgery scheduling, deposits, approved discounts and refunds.
- Deployed on AWS and fixed production issues such as Nginx 403 errors and security group misconfigurations.

**Haazri - GPS and Biometric Attendance | MKS Solutions** | Expo/React Native, PostgreSQL, Prisma, pm2

- Built an attendance verification system and mobile app, cutting attendance fraud and manual correction cases across multi-office deployments.
- Improved data integrity for attendance records with PostgreSQL/Prisma and secure password hashing.

**CortexAI | Final Year Project, 2026** | Next.js, TypeScript, Node.js, QwenCoder 2.5b (fine-tuned), LemonSqueezy

- Leading development of an AI software testing framework that generates test cases with a fine-tuned model and runs them against your app to find bugs.
- Includes a dashboard to view test results and logs.

## Education

**BS Software Engineering | University of Sindh, Jamshoro | 2027**

- **University Learning Portal Redesign:** Rebuilding my university's learning portal to be faster, lighter on bandwidth and easier to maintain.

## Certificates

**Algorithms | Stanford University Online | Sept 2024**

- Divide and Conquer, Sorting, Searching and Randomized Algorithms
- Graph Search, Shortest Paths and Data Structures

## Skills

- **Frontend:** React, Next.js, TypeScript, Tailwind CSS, React Native, Expo
- **Backend:** Node.js, Express, Django, Django REST Framework, Laravel, REST APIs, WebSockets
- **Databases:** PostgreSQL, MongoDB, MySQL, Prisma, Redis

- **Cloud and DevOps:** AWS (Elastic Beanstalk, EC2, RDS), Deployment, pm2, Celery
- **Other:** System Design, Performance Optimization, Stripe Integration, Role-Based Access Control