

Mahmudul Hasan Hasib

Senior Software Engineer

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Professional Summary

Senior Software Engineer with 6+ years of experience building scalable backend systems, multi-tenant SaaS platforms, and healthcare technology solutions. Proven expertise in architecting affiliate marketing systems, laboratory information systems (LIS), and high-traffic applications serving millions of users. Skilled at leading development teams, optimizing database performance, and implementing secure authentication systems. Strong hands-on experience with Laravel, NestJS, Python, FastAPI, PostgreSQL, MongoDB, and AWS infrastructure. Track record of delivering zero-downtime releases, mentoring engineering teams, and driving technical excellence in fast-paced environments.

Technical Skills

Architecture: Multi-tenant SaaS, REST APIs, microservices, webhook systems, affiliate marketing platforms, database design, system optimization

Languages & Frameworks: PHP (Laravel, Livewire), JavaScript/TypeScript (NestJS, Express, Next.js, React.js, Vue.js), Python (ASTM/HL7 protocol parsers, FastAPI)

Data & Messaging: PostgreSQL, MySQL, MongoDB, Redis, Firebase Realtime Database, complex SQL optimization, data migration

Cloud & Infrastructure: Docker, AWS (EC2, S3, RDS, Lambda, SQS, CloudFront), Firebase (Auth, Cloud Functions, Admin SDK), Git, Laravel Horizon, Supervisor, serial/TCP communication

Security & Auth: OAuth2, JWT, SSO, OWASP practices, Auth0, role-based access control (RBAC), secure authentication systems

DevOps & Tools: CI/CD pipelines, containerization, production deployment, debugging across Windows/macOS/Linux environments

APIs & Integration: REST API design, GraphQL, webhook implementation, third-party integrations (advertising networks, payment systems), signature validation, postback systems

Frontend: Tailwind CSS, Alpine.js, React.js, Vue.js, Next.js, WebSocket integration

Testing: Unit testing, integration testing, machine simulators for laboratory equipment testing

Leadership: Technical architecture, team mentoring (7+ developers), code review, cross-functional collaboration, Agile methodologies

Professional Experience

Senior Backend Engineer

Reocket Pte Ltd

September 2025 – Present

Singapore (Remote)

- **Architected comprehensive affiliate marketing system**, designing database schemas for offers, campaigns, advertisers, and transaction tracking with EPC (Earnings Per Click) calculations across 200+ advertising partners.
- **Built robust postback webhook infrastructure** integrating multiple advertising networks, implementing signature validation middleware and immediate credit models for user transactions.
- **Enhanced core platform capabilities** by designing and delivering offer progression, completion, and attribution features, enabling reliable reporting and fraud-resistant tracking.
- **Optimized complex SQL operations** for offer categorization and EPC value updates, managing bulk updates across hundreds of records while maintaining data integrity.

- Configured and deployed **Firebase services**, setting up service accounts, implementing secure authentication, and managing cloud functions for real-time features.
- Established **production-grade infrastructure**, configuring Laravel Horizon with Supervisor for queue management and troubleshooting Kubernetes deployment issues in production environments.
- Developed **transaction processing workflows** with sophisticated crediting logic, fraud prevention mechanisms, and comprehensive reporting capabilities.
- Defined **backend architecture and coding standards**, collaborating cross-functionally with product, frontend, and design to deliver zero-downtime releases.

Software Engineer

Softzino Technologies

*November 2024 – October 2025
Dhaka, Bangladesh*

- Led development of **comprehensive Diagnostic Management System**, architecting a multi-tenant SaaS platform using Laravel and Vue.js to manage laboratory operations, patient records, and test workflows for multiple diagnostic centers.
- Engineered **bidirectional Laboratory Information System (LIS)** using Python and FastAPI, enabling real-time communication between medical laboratory equipment and web applications through industry-standard ASTM and HL7 protocols.
- Implemented **WebSocket and TCP protocol communication**, developing custom parsers and handlers for serial port and network-based data exchange with various laboratory instruments.
- Built **comprehensive machine simulators** for testing laboratory equipment integration without physical devices, accelerating development cycles and ensuring protocol compliance across different instrument types.
- Deployed full-stack application infrastructure on **AWS**, managing EC2 instances, S3 storage for medical reports and images, RDS databases, and implementing SMS notification systems for test result alerts.
- Led and mentored a team of 5 developers, establishing architectural patterns, conducting code reviews, and ensuring delivery of high-quality, maintainable healthcare software solutions.
- Integrated **PostgreSQL data layer** for storing laboratory test results, patient information, and equipment data with proper HIPAA-compliant data normalization and security measures.
- Debugged and resolved cross-platform issues in production laboratory environments, ensuring 99.9% uptime for critical healthcare operations.

Senior Software Engineer

AriSaf Tech Ltd.

*May 2022 – October 2024
Dhaka, Bangladesh*

- Led full-stack development of **Yoga Project**, a comprehensive POS and reservation management system, architecting scalable database structures and implementing complex business logic for class scheduling, membership management, and payment processing.
- Optimized database performance, designing efficient schemas and query optimization strategies to handle large-scale data processing with minimal latency, reducing page load times by 60%.
- Built modern, interactive user interfaces using React.js, Next.js, and Alpine.js, delivering responsive and performant frontend experiences with seamless real-time updates.
- Developed multi-tenant SaaS delivery system with comprehensive driver management, document verification, depot assignment tracking, and route optimization using Laravel and PostgreSQL.
- Implemented MongoDB-to-PostgreSQL data migration strategies, ensuring data integrity during complex database transitions while maintaining zero downtime for production systems.

- **Integrated Firebase authentication and real-time database features**, building secure, scalable authentication systems with role-based access control (RBAC) and SSO capabilities.
- Established best practices and design patterns, consistently delivering maintainable, well-documented code following SOLID principles and industry standards.

Senior Backend Web Developer

Sayburgh Solutions

July 2020 – April 2022

Dhaka, Bangladesh

- **Architected and led development of FoodQo**, a multi-tenant SaaS restaurant management platform serving multiple clients with database-per-tenant architecture, delivering Netflix-style subscription models with integrated customer support.
- **Designed and launched DigiAdent**, a high-traffic SaaS platform for digital journalism powering Somoy News (somoynews.tv) with millions of daily visits and live TV broadcasting capabilities.
- **Built the core system and guided a 5-developer team**, establishing architectural patterns, conducting code reviews, and eliminating the need for offline vendor intervention through robust automation.
- **Designed database schemas for REST and GraphQL APIs**, implementing efficient data models that balanced query performance with scalability for high-traffic applications.
- **Achieved 40% performance improvement** on administrative APIs through systematic Apache benchmarking, query optimization, and strategic caching implementation.
- **Developed complex analytics queries** for large-scale SaaS application, aggregating data across multiple tenant databases for business intelligence and reporting dashboards.
- **Managed and mentored cross-functional team of 7+ developers**, establishing architectural standards, code quality guidelines, and ensuring delivery of production-ready solutions.
- Implemented Redis caching strategies and queue-based job processing for frequently accessed data, significantly reducing database load and improving response times.

Junior Backend Developer

Sayburgh Solutions

July 2019 – June 2020

Dhaka, Bangladesh

- Developed and maintained REST APIs for large-scale restaurant management system, implementing core business logic for order processing, inventory management, and reporting features.
- Built internal task management system to streamline team workflow, project tracking, and resource allocation, improving team productivity by 30%.
- Collaborated with senior developers to deliver robust web applications for diverse clients across restaurant, e-commerce, and corporate sectors.
- Enhanced technical skills through mentorship and adherence to best practices, consistently meeting project deadlines while maintaining high code quality standards.

Education

Bachelor of Science in Computer Science and Engineering (BCSE)

IUBAT – International University of Business Agriculture and Technology

Graduated: 2019

Interests

Sports (Cricket, Football, Chess, Badminton), Traveling, Watching Movies, Entrepreneurship

Online Profiles

GitHub: github.com/mahmudulhsn | LinkedIn: linkedin.com/in/mhhasib
Dev.to: dev.to/mahmudulhsn | Stack Overflow: stackoverflow.com/users/11524123