MD KHAYRUL HASAN

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Dhaka, Bangladesh

SUMMARY

Senior Full Stack Specialist with **12+ years** of experience building scalable enterprise applications. Expertise in modern web technologies, microservices architecture, and cloud infrastructure. Proven track record delivering mission-critical solutions for government agencies (Prime Minister's Office, Bangladesh Navy), financial institutions (WingsFin Securities), and enterprise clients. Strong advocate for clean architecture, SOLID principles, and DevOps best practices.

SKILLS

Frontend : React.js, Next.js, Angular, TypeScript, HTML5, CSS3, Tailwind CSS, Bootstrap, Redux, MobX
Backend : Node.js, Nest.js, Express.js, PHP/Laravel/Symfony, Java/Spring Boot, Python/Django
Databases : PostgreSQL, MySQL, MongoDB, Redis, DynamoDB, Oracle, Database Replication, Timescaledb
Cloud/DevOps : AWS (Lambda, S3, RDS, EC2), Docker, Kubernetes (Helm), CI/CD, Jenkins, GitHub Actions, Bitbucket
APIs & Integration : REST API, GraphQL, WebSocket, Apache Kafka, Third-party API Integration
Security/Monitoring : JWT, OAuth, RBAC, SSL/TLS, ELK Stack, Centralized Logging
Architecture : Microservices, Event-Driven Architecture, Monolith Decomposition, SOLID/DRY/KISS
Leadership : Team Leadership (10+ members), Agile/Scrum/Kanban, Stakeholder Management, Technical Consulting

EXPERIENCE

Alitisal Aljadeed
Software Engineer (Lead Consultant)
Oct. 2025 – Present
Tripoli, Libya (Remote)

- Lead Consultant providing technical leadership and strategic guidance for complex software development initiatives
- Business-to-Technical Translation: Collaborated with stakeholders to analyze workflows and convert customer needs into actionable technical roadmaps
- Deployment Success: Validated system functionality through rigorous pre- and post-deployment testing protocols
- Advanced Troubleshooting: Acted as senior technical resource for resolving L3/L4 functional issues and identifying systemic solutions
- Team Leadership: Mentored team members on software design principles, system administration, and industry best practices

WingsFin Securities Limited
Executive Vice President & Senior Backend Engineer
Aug. 2023 – Sept. 2025
Dhaka, Bangladesh (Hybrid)

- Led team of 7 developers; architected scalable backend systems using Node.js, Java Spring Boot, PHP/Laravel, and Apache Kafka
- Designed and implemented database management systems with PostgreSQL, Timescaledb, and database replication
- Optimized AWS infrastructure for auto-scaling and high availability; established CI/CD pipelines using Bitbucket Automation
- Implemented JWT-based authentication with role-based access control (RBAC); integrated centralized monitoring with ELK Stack
- Integrated DevOps practices into development cycle utilizing Docker and Kubernetes
- **Key Results**: Increased backend system performance by 30%, reduced deployment time by 50%, achieved 95%+ code coverage, cut cloud costs by 25%

eGeneration
Senior Software Engineer & Tech Lead, Government Technology
Jul. 2022 – Aug. 2023
Dhaka, Bangladesh

- Led team of 10 developers for Socioeconomic Dashboard for Bangladesh; received official A2i initiative recognition
- Spearheaded COVID-19 dashboard for Prime Minister's Office during global pandemic; architected for 99.9% availability
- Tech Lead for ELOG Management System (BCPS FCPS); implemented microservices architecture with PHP Laravel and Apache Kafka

- Ensured accurate data integration from 15+ government sources for real-time updates supporting national policy-making
- **Impact**: Delivered critical government dashboards used by Prime Minister's Office for national decision-making during crisis

Senior Software Engineer   *Jul. 2021 – Jun. 2022*
- Developed Socioeconomic Dashboard for policymakers providing real-time insights on employment, income, education, healthcare
- Contributed to architectural design ensuring scalability, security, and maintainability of large-scale government systems
- Applied Agile development methodologies; participated in full software development lifecycle from design to deployment

Software Engineer (Remote)   *Dec. 2020 – Jun. 2021*
- Led COVID-19 Dashboard development for Prime Minister's Office during global pandemic
- Designed architecture to handle large data volumes during peak usage; integrated data from Ministry of Health, WHO, Johns Hopkins
- Implemented robust security measures for sensitive health data; created user-friendly visualizations for complex pandemic data
- **Impact**: Enabled informed government decisions on healthcare resource allocation, lockdown measures, and public safety

Genex Infosys Limited   May 2018 – Nov. 2020
Senior Software Engineer   Dhaka, Bangladesh
- Led architecture and development of full-scale Human Resource Management System with integrated job portal
- Implemented core HR features: recruitment tracking, employee lifecycle management, payroll, leave management, performance evaluation
- Automated workflows for HR, back office, and administrative departments; integrated biometric attendance system
- Designed and optimized database structures for high volumes of employee data; implemented role-based access control

- Developed reporting and analytics modules to support management decision-making
- **Results**: Reduced manual effort through automation; streamlined HR operations from recruitment to performance evaluation

icddr,b   Jul. 2018 – May 2019
Consultant (Computer Programmer)   Dhaka, Bangladesh
- Designed and developed Logistics Management System automating inventory tracking, shipment processing, and order management
- Designed, implemented, and optimized relational database schemas for data integrity and performance
- Developed efficient queries, indexing strategies, and stored procedures for large datasets
- Built responsive, user-friendly web interfaces; implemented role-based access control and authentication mechanisms
- Integrated third-party APIs and internal services for real-time data exchange
- **Results**: Automated logistics operations; improved data integrity through optimized database design

ATI Limited   Oct. 2015 – Apr. 2018
Software Engineer   Dhaka, Bangladesh
- Delivered mission-critical Sailor Management System for Bangladesh Navy with dynamic query builder for ad-hoc reporting
- Managed complete sailor lifecycle: onboarding, mission assignments, training certifications, pension and retirement processing
- Gathered and analyzed requirements with stakeholders; converted into technical designs and specifications
- Identified system bottlenecks and optimized performance across key application components
- Maintained 95% stakeholder satisfaction rate through strong client alignment
- **Impact**: Digitized manual paper-based records system; improved data retrieval speed from hours to seconds

PROJECTS

Trade Application – WingsFin Securities   2023 – 2025
Executive VP & Senior Backend Engineer   High-Frequency Trading Platform
- High-performance trading engine with real-time order processing and WebSocket API for live market data
- Microservices architecture using Node.js, PHP Laravel, Java Spring Boot; JWT authentication with RBAC
- PostgreSQL with Timescaledb and database replication; CI/CD with Bitbucket Automation; ELK Stack monitoring

- **Impact**: Processing 50,000+ daily transactions with 99.9% uptime; reduced latency by 40%

ELOG Management System – BCPS FCPS   2022 – 2023
Tech Lead   Examination Management System
- Microservices architecture with PHP Laravel and React.js frontend; Apache Kafka for event-driven communication
- Real-time examination tracking and candidate assessment workflows; reduced administrative overhead by 40%
- CI/CD pipeline with Jenkins; comprehensive monitoring and logging; role-based access control
- **Impact**: Streamlined examination workflow for 10,000+ candidates; reduced evaluation time from weeks to days

Socio-Economic Dashboard for Bangladesh   2022
Senior Software Engineer & Tech Lead   Government Analytics Platform
- Real-time insights on population, employment, education, health, poverty indicators for national policymakers
- Technical partner for a2i program; interactive charts with Highcharts/Tableau; multi-language support (Bengali/English)
- Consolidated data from 15+ government sources for evidence-based policy making
- **Impact**: Received official A2i initiative recognition; enabled data-driven decisions for national development planning

COVID-19 Dashboard for Prime Minister's Office   2020 – 2021
Software Engineer & Tech Lead   National Pandemic Response System
- Real-time cases tracking with interactive map and district-wise statistics during global pandemic
- Data integration from Ministry of Health, WHO, Johns Hopkins; multilingual support; 99.9% system availability
- Critical tool supporting national pandemic response and government decision-making
- **Impact**: Supported data-driven decisions on lockdowns, resource allocation; facilitated transparent public communication

Sailor Management System – Bangladesh Navy   2015 – 2018
Software Engineer   Military Personnel Management
- Complete sailor lifecycle management with dynamic query builder for ad-hoc reporting
- Mission assignment tracking, training certification management, pension and retirement processing
- Dynamic Query Builder enabled ad-hoc reporting reducing IT dependency
- **Impact**: Improved data retrieval speed from hours to seconds; digitized 20+ years of manual paper records

Inventory Management System – Drug International Ltd   2015 – 2018
Software Engineer   Pharmaceutical Supply Chain
- Batch-wise tracking with expiry management; multi-warehouse operations; FEFO stock rotation
- Oracle database optimization; DGDA compliance; OWASP security; real-time analytics dashboard
- Role-based access control with OWASP security compliance; automated purchase orders
- **Impact**: Reduced inventory costs by 18%, expired losses by 65%; handling 50,000+ SKUs across 5 warehouses

EDUCATION

Bangladesh University of Business and Technology (BUBT)
Bachelor of Science in Computer Science & Engineering   Dhaka, Bangladesh

ACHIEVEMENTS

A2i Initiative Recognition : Official recognition for innovative software solutions from government digital transformation program

Cloud Cost Optimization : 25% reduction in AWS infrastructure costs through resource optimization

Performance Optimization : 30% increase in backend system performance through innovative architecture

Code Quality : Maintained 95%+ code coverage with comprehensive unit and integration testing

Government Impact : Delivered critical systems used by Prime Minister's Office for national decision-making

LANGUAGES

English : Professional Proficiency
Bengali : Native