

Hasebul Hassan Chowdhury

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 Portfolio

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Dhaka, Bangladesh

SUMMARY

Engineering professional with 5+ years of experience designing, architecting, and scaling high-performance systems across monolithic and distributed architectures for global enterprises, including DN Media Group, Zauai Stay, and Stiftelsen Asta. Strong expertise in system design, backend engineering, and cloud infrastructure (AWS), with a focus on building scalable and resilient platforms. Experienced in database optimization (SQL/NoSQL) and performance tuning for mission-critical systems. Hands-on experience integrating AI-driven solutions using Retrieval-Augmented Generation (RAG) and Large Language Models (LLMs). Proven leadership in cross-functional teams with strong stakeholder communication skills to translate complex technical requirements into clear business outcomes. Also actively involved in mentoring and training competitive programmers and office trainees, fostering technical growth and practical engineering skills in collaborative environments.

SKILLS

- **Languages:** Java, Kotlin, Python, JavaScript, C, C++
- **Databases:** PostgreSQL, MongoDB
- **Backend:** Spring Boot, FastAPI, Nest, Express
- **Frontend Tools:** HTML, CSS, Angular, React
- **Cloud Services:** AWS (IAM, EC2, S3, RDS, ECR, ECS, ELB, Lambda, CloudWatch, SQS)
- **Misc:** Git, GitHub, Jenkins, GitHub Actions, Docker, Redis, Elasticsearch
- **AI & ML:** LLM API Integration, Prompt Engineering, Retrieval-Augmented Generation (RAG), Vector Search & Embeddings
- **Interests:** Software Architecture, Distributed Systems

EDUCATION

- **American International University–Bangladesh (AIUB)** Dhaka, Bangladesh
BSc in Computer Science and Engineering; CGPA: 3.58/4.00 Jan 2018 – Apr 2022
- **Higher Secondary Certificate (HSC)** Cumilla, Bangladesh
Science, Comilla Govt. College; GPA: 4.00/5.00 2015 – 2017

EXPERIENCE

- **Cefalo Bangladesh Ltd.** Dhaka, Bangladesh
Software Engineer (L1 → L2) Jun 2022 – Present
 - **ATS Platform Development:** Led a team of 4 engineers to build a scalable Applicant Tracking System using TypeScript, NestJS, and React. Implemented role-based access control and integrated HackerRank, improving interview workflow efficiency and candidate management.
 - **Performance Optimization:** Reduced large-scale archive import time from 3–4 minutes to under 1 minute by designing advanced PostgreSQL indexing strategies and implementing in-memory caching with Ehcache.
 - **Scalable Backend Systems:** Designed and implemented background processing pipelines and scheduler-based architectures using Spring Boot, significantly improving system throughput and handling high-volume data operations.
 - **Observability & Monitoring:** Implemented centralized logging and monitoring using the ELK stack (Elasticsearch, Logstash, Kibana), enabling faster issue detection and improving system reliability.
 - **CI/CD & DevOps:** Designed release pipelines using GitHub Actions, Docker, and AWS EC2, reducing deployment time by 30%. Integrated Slack notifications with Jenkins to improve CI/CD visibility and feedback loops.
 - **Globalization & Platform Features:** Implemented Angular i18n for multi-language support across 20+ markets and developed booking automation features (quotation, workflow, discount modules), enhancing platform usability and reducing user-reported issues.

- **Caching & System Efficiency:** Introduced Redis caching and optimized scheduler-based processing to reduce latency in high-traffic scenarios and improve overall system responsiveness.
- **Collaboration & Documentation:** Contributed to Agile development processes, including sprint planning, code reviews, and production support. Authored technical documentation to improve onboarding efficiency and knowledge sharing.

• Web Developer

Jun 2021 – May 2022

American International University-Bangladesh (AIUB)

Dhaka, Bangladesh (onsite)

- **Web Development:** Developed and maintained web-based features for students, faculty, and administrative users, improving accessibility of academic and university services.
- **Backend Development:** Implemented backend functionalities using **Java** for internal portal modules and dynamic data-driven pages.
- **Database Optimization:** Designed and optimized **MySQL queries** for efficient storage and retrieval of academic and service-related data.
- **Feature Development:** Built dynamic modules including notices, announcements, department pages, and student services, improving content update workflows.

PROJECT WORK

• Trading Portfolio Platform — Live — GitHub

- **Full-Stack Portfolio Platform:** Built a stock portfolio platform (Next.js, TypeScript, Supabase, PostgreSQL) supporting transactions, live holdings, and P&L analytics. Integrated market-data APIs for real-time pricing and reporting. Used Cursor AI (structured prompts, agent loops) to accelerate development while maintaining architectural control.

• QuickChat — Live — GitHub

- **Real-Time Chat Application:** Built a WebSocket-based chat system with authentication and Redis caching for low-latency messaging. Integrated Elasticsearch for efficient message indexing and search.

PUBLICATIONS

ORCID

- **AI-Enhanced Prediction of Respiratory Irritation From Biomass Combustion Byproducts: An Integrative Machine Learning Framework for Sustainable Bioenergy Systems (2024–2025) — ICCCES 2026, Accepted. View on IEEE Xplore. :**
- **Machine Learning-Based Early Risk Stratification Framework for Chronic Kidney Disease Progression (2024–2025) — IEEE ICSFT 2026, Accepted. View on IEEE Xplore :**

ACHIEVEMENTS AND COMPETITIVE PROGRAMMING

- **Solved 2100+ Competitive Programming Problems:** Across Codeforces, CodeChef, SPOJ, UVa, AtCoder, and LeetCode. stopstalk.com/user/profile/WA_TLE
- **Top 7.6% Global Rank on LeetCode:** Solved 800+ problems. leetcode.com/u/Hasebul
- **10th Place — Intra AIUB Programming Contest (Fall 2021–22):** Secured 10th place in the AIUB Intra Programming Contest. oj.synapse0.com/standings.php?contest=1013
- **6th Place — AIUB CS Fest Programming Contest (2018):** Secured 6th place in the AIUB CS Fest Programming Contest. toph.co/c/aiub-cs-fest-2018-j/standings?start=0

CERTIFICATIONS

- **Secure Coding & Application Security — SecureFlag:** Hands-on training on secure coding practices, OWASP Top 10 vulnerabilities, and real-world exploitation scenarios. View Credential
- **Data Structures — University of California San Diego (Coursera):** Covered fundamental data structures, algorithm design, and performance optimization techniques. View Certificate