

Abrar Mahmud Hasan

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SUMMARY

Computer Science student with hands-on experience building production-grade ERP and web systems. Specialized in designing scalable microservices architectures and resilient full-stack applications. Proficient in implementing clean code practices, distributed systems, and real-time data pipelines, with a focus on transitioning into AI Engineering by integrating machine learning models into robust, high-availability environments.

EDUCATION

- Islamic University of Technology** CGPA 3.80/4.00
Bachelor of Science in Computer Science & Engineering
Expected Graduation: August 2027
- Notre Dame College, Dhaka** GPA 5.00/5.00
Higher Secondary Certificate

EXPERIENCE

Shahrish Engineering & Construction Limited December 2024 - September 2025
Junior Software Engineer

- Designed and delivered production-grade web and ERP solutions including internal supply-chain modules that improved workflows and **reduced manual data handling by 90%**.

PROJECTS

- Valerix (Microservice + Kubernetes + RabbitMQ + Prometheus + Grafana)**: Valerix is a Kubernetes-orchestrated microservices platform that demonstrates service resilience, controlled failures, and production style cloud deployment using Docker and AWS EKS.
- CurioKids (React Native + Node + Firebase + AI)**: Built an AI-driven learning app for kids with personalized puzzles, gamification, parental controls, and real-time progress tracking using Firebase Authentication and Firestore.
- HealthX (React + Node + Firebase + Gemini)**: Hackathon winning AI powered application bridging the gap in medical support for Bangladesh's Hill Tracts and Rural Regions.
- Predictive Modeling for Agriculture (Python & Scikit-learn)**: Developed a supervised ML model with feature selection to identify the most predictive soil attribute (N, P, K, or pH) for crop-type classification.

PROGRAMMING SKILLS

- Languages**: Golang, JavaScript, Python, C++, C#, Java, SQL
- Stacks & Frameworks**: Gin, React, NextJS, Spring Boot, Django, Express
- DevOps & Microservices**: Git, Docker, Kubernetes, RabbitMQ, Prometheus, Grafana
- Data Science & ML**: *Supervised Learning*: Linear/Logistic Regression, Decision Trees, k-NN, SVM, *Unsupervised Learning*: k-Means Clustering, Hierarchical Clustering, *Tools & Libraries*: Scikit-learn, Pandas, NumPy, Matplotlib

LEADERSHIP & ORGANIZATIONAL EXPERIENCE

- Joint Secretary**, IUT Computer Society December 2025 - Present
- General Secretary**, Notre Dame Science Club May 2022 - May 2023

AWARDS & ACHIEVEMENTS

- Champion**, Microservice & DevOps Hackathon, BUET CSE Fest 2026
- 1st Runner-up**, Future Builders 2025 AI Driven Cognitive Innovation Hackathon
- Finalist**, Top 7 out of 116 Teams at HackCSB Hackathon
- Participant**, ACM ICPC Dhaka Regionals