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 + Graphana)**: 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, Graphana
- **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