

Noman Chowdhury Munna

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EXPERIENCE

Software Engineer, *DataCrata*, Dhaka, Bangladesh

May 2026 – Present

- Engineered systems and database structures for core e-commerce and proprietary **DataCrata backends**.
- Integrated third-party logistics and payment gateways including **Daraz Dashboard APIs**, **RedX delivery**, and **SSLCommerz payment systems**.
- Audited and secured endpoints, resolving critical vulnerabilities such as **race conditions**, **IDOR (Insecure Direct Object References)**, **XSS (Cross-Site Scripting)**, and **SSRF (Server-Side Request Forgery)**.

Junior Software Engineer (Backend), *Barikoi Technologies Ltd.*, Dhaka, Bangladesh

Jan 2025 – April 2026

- Enabled low-latency access to **millions of geospatial images** on the large-scale **StreetView platform (ThirdEye360)** by engineering and optimizing high-throughput image delivery pipelines.
- Improved processing efficiency, **reduced scraping time to 30%** and data accuracy of a geospatial scraping system by re-architecting it with **FastAPI**, **Redis**, and **Selenium** utilizing asynchronous background jobs.
- Ensured reliable data ingestion for ML models by building scalable **data pipelines** that process **8.7M+ records** through optimized scraping, cleaning, and labeling workflows.
- Increased recognition accuracy of sensitive financial data in noisy documents by fine-tuning **OCR models** and optimizing preprocessing and validation logic.
- Enhanced spatial precision and mapping quality of aerial imagery by refining deep learning pipelines for **building polygon detection** using advanced post-processing techniques, **reduced inference time to 50%**.

PROJECTS

AI-Powered Healthcare Platform (In Progress)

- Building an AI-driven healthcare system using **Spring Boot**, **Next.js**, **PostgreSQL**
- Designing modules for patient management, medical records, and telemedicine integration
- Architecting core services including **AI-based symptom triage**, **e-prescription workflows**, and **doctor-patient teleconsultation**

beShera: Ed-Tech Platform

- Developed a scalable Ed-Tech platform with newsfeed, student-teacher connections, examination system, digital library, and analytics dashboards using **FastAPI**.
- Implemented secure Role-Based Access Control (**RBAC**) and a standalone notification service using **RabbitMQ** for reliable asynchronous communication.

CMC-Optimizer (Thesis Project)

- Built a simulation system optimizing CMC production using **SCA and PSO algorithms**
- Improved efficiency via parameter tuning and implemented data visualization using Pandas and Matplotlib

EDUCATION

Green University of Bangladesh

BSc in Computer Science and Engineering

2020 – 2024

Dhaka, Bangladesh

SKILLS

Programming Languages: Python, Java, Golang, C++, JavaScript, Bash

Frameworks & Libraries: FastAPI, Django, Spring Boot, Spring MVC, React.js, Next.js, Playwright, Selenium

Databases: PostgreSQL, PostGIS, MySQL, MongoDB, Redis

DevOps & Tools: Docker, Kubernetes, CI/CD, Terraform, Ansible, GCP, GitHub Actions, NGINX, Cloudflare, Prometheus, Grafana, RabbitMQ, Typesense, Linux, WSL, Git, QGIS

Core Concepts: Data Structures, Algorithms, OOP, Design Patterns, Networking, Debugging

ACHIEVEMENTS

- CTFs: **5th** in BUET CSE FEST CTF 2023, **7th** in Flag Hunt 2022, **9th** at National University Cyber Drill 2021, **10th** at National University Cyber Drill 2022, **Top 3%** at TryHackMe
- Solved **1800+ problems** and participated in **140+ programming contests**
- Codeforces Specialist (1422), CodeChef 2-Star (1442)
- ICPC Dhaka Regional Contestant (2021, 2022, 2023, 2024)
- GUB IDPC Champion (2022), 1st Runner-up (2024), 2nd Runner-up at CSE Carnival 2024
- Participated in IUPCs: RUET, BUET, SEC, CUET, JU NCPC

RESEARCH

Optimizing Carboxymethyl Cellulose (CMC) Production: A Metaheuristic Algorithm Approach

- Co-authored research on optimizing industrial production using **SCA** and **PSO** algorithms