

Fateha Hossain Anushka

Health Informatics Researcher | Backend Engineer | Final-Year CSE Student

Dhaka, Bangladesh | fatehahossainanushka@gmail.com | [Portfolio](#) | [GitHub](#) | [LinkedIn](#)

Education & Academic Distinction

B.Sc. in Computer Science and Engineering

Daffodil International University, Dhaka

Expected Dec 2026

CGPA: 3.92/4.00

- Dean's Honor List Award (4 times); recipient of consecutive university academic merit scholarships.
- Thesis: *Parameter-Efficient Adaptation of Vision Foundation Models for Multi-Class Dental Radiograph Diagnosis*—benchmarking DINOv2, BiomedCLIP and MedSAM with LoRA, BitFit and VPT under data-scarce settings.

Research & Engineering Experience

Research Assistant

Health Informatics Research Lab

Apr 2026–Present

Dhaka, Bangladesh

- Researching explainable and uncertainty-aware medical AI for panoramic radiographs, including pediatric morphology alignment and parameter-efficient adaptation of vision foundation models.
- Developing reproducible evaluation pipelines for medical-image and hematological classification studies; contributing to experimental analysis and manuscript preparation.

Backend Developer Intern

CSE-Tech

Mar 2026–Present

Dhaka, Bangladesh

- Develop database-backed REST APIs and modular backend features across Spring Boot, Laravel and FastAPI applications using MySQL/PostgreSQL, validation, authentication and testing workflows.

Selected Research

- PMAM for Pediatric Panoramic Radiographs** (journal manuscript in preparation): morphology alignment, uncertainty estimation and explainable multi-disease detection.
- Four conference manuscripts under review** (2026): explainable tri-class hematological classification and three low-resource Bangla NLP studies spanning translation, dialect normalization and ethnic-language identification.

Selected Technical Projects

ResiliNet | Python, FastAPI, LightGBM, SHAP, Mininet, OpenFlow, React

[Live Code](#)

Explainable ML-assisted SDN digital twin with congestion-risk forecasting, three routing policies, seed-controlled experiments, provenance validation, and automated campaign evaluation.

ComputePulse | FastAPI, LightGBM, SHAP, React, TypeScript

[Live Code](#)

Led development of a hackathon prototype for simulated GPU-cluster telemetry, explainable failure-risk scoring, operational alerts and dashboard-based triage.

Healthcare Analytics Platform | Python, scikit-learn, SHAP, FastAPI, React

[Code](#)

Reproducible structured-health modeling with cross-validation, calibration-aware evaluation, feature attribution and explicit clinical-use limitations.

DIU GCPC Official Website | Institutional Web Engineering

[Live Code](#)

Designed, developed and deployed the club's official platform on the Daffodil International University domain.

DIU Academic Analytics Platform | React, TypeScript, Firebase, Recharts

[Live Code](#)

Cloud-backed academic planning with authenticated records, credit-weighted analytics, goal-feasibility calculations and interactive reporting.

Study Hub | React, TypeScript, Express, MongoDB, JWT

[Code](#)

Full-stack study-management prototype with resource tracking, study sessions, analytics, CSV export and optional AI-assisted suggestions.

Leadership, Teaching & Training

President, DIU Girls' Computer Programming Club

Jan 2026–Present

Coordinate ACM, research and career-development activities; lead the club's institutional web-platform development.

Student Prefect, Object-Oriented Programming in Java

May–Dec 2025

Supported laboratory problem solving, Java/OOP explanations, debugging and code review for undergraduate students.

Training: 12 Coursera certificates covering machine learning, deep learning, Python, backend APIs and cloud computing.

Technical Skills

ML/Research: Python, PyTorch, scikit-learn, LightGBM, SHAP, Grad-CAM, VFM, PEFT, Pandas

Backend/Systems: Spring Boot, FastAPI, Laravel, REST APIs, PostgreSQL, MySQL, Docker, Linux

Web/Tools: React, Next.js, TypeScript, Git, GitHub Actions, Postman, LaTeX