



MD RATUL HOSSEN

B.Sc. in Computer Science & Engineering
— Daffodil International University

EUROPASS
CURRICULUM VITAE

PERSONAL INFORMATION

Address	DSC, Birulia, Savar, Dhaka, Bangladesh, 1341	Nationality	Bangladeshi
Phone	+880 1972167939	Email	251-15-596@diu.edu.bd
LinkedIn	linkedin.com/in/mdratulhossen	GitHub	github.com/itzRatul
Portfolio	itzratul.github.io/portfolio		

PERSONAL STATEMENT

Dedicated Computer Science & Engineering student at Daffodil International University with a strong foundation in Python, C, and C++, focused on Artificial Intelligence and Large Language Model (LLM) development. Experienced in building production-level AI applications involving Retrieval-Augmented Generation (RAG), voice-enabled conversational agents, and real-time data processing pipelines. Currently advancing expertise in transformer architectures, model fine-tuning techniques, and scalable AI systems. Active contributor to university AI research initiatives, with the long-term ambition of building LLMs from scratch.

EDUCATION AND TRAINING

Jan 2025 – 2028
(Expected)

B.Sc. in Computer Science & Engineering
Daffodil International University
Dhaka, Bangladesh

Semester	SGPA
1st Semester	3.69
2nd Semester	3.58
3rd Semester	3.86

Relevant Coursework: Data Structures, Algorithms, Database Systems, Object-Oriented Programming

2023

Higher Secondary Certificate (HSC)
Noapara Govt. College
Jashore Board — Science Group
GPA: 4.58



PROJECTS

Production Deployed

D.A.I.C — Daffodil AI Club Assistant

Python, FastAPI, RAG, Web Speech API, LLM Integration

Live: daic-diu.vercel.app

A specialized, voice-enabled AI assistant developed for the Daffodil AI Club, now serving as the club's official virtual assistant.

- **RAG pipeline** for grounded, context-specific responses using club knowledge base
- **Native Bengali voice recognition** enabling seamless interaction in Bangla and English
- **Real-time internet search** for up-to-date information retrieval
- Deployed on Vercel and Hugging Face Spaces

Data Science

Project Rainfall — Data Analysis & Prediction

Python, Pandas, NumPy, Matplotlib, Scikit-learn

Source: github.com/itzRatul/project-rainfall

Processed and analyzed 24 years (2001–2024) of daily rainfall data from multiple geographic locations. Built automated data pipelines with intelligent column detection.

Applied linear regression models for rainfall trend forecasting and generated comprehensive visualizations.

Systems Programming

Patient Management System

C, File Handling, Data Structures

Source: github.com/itzRatul/Patient-management-system

Developed a secure command-line healthcare record management system with multi-user authentication, unique identifier-based patient profile management, intelligent search capabilities, and persistent file storage.



PERSONAL SKILLS

Mother tongue: Bengali

Language	Understanding	Speaking	Writing
English	B2	B2	B2
Hindi & Urdu	B1	B1	—

Programming Languages

Python (Advanced), C & C++ (Proficient)

AI & Machine Learning

Large Language Models (LLMs), RAG Systems, AI Agent Development

LLM & ML Stack

PyTorch, Scikit-learn, Ollama, Hugging Face

Data Science

NumPy, Pandas, Matplotlib, Seaborn

Web & Deployment

FastAPI, Vercel, Hugging Face Spaces, Git & GitHub

Organisational Skills

- Active executive member in two university-level clubs, contributing to event coordination, team collaboration, and knowledge-sharing initiatives
- Experience managing end-to-end project development — from concept and architecture to deployment and maintenance

Areas of Interest: AI Research & LLM Development | Retrieval-Augmented Generation (RAG) | Problem Solving | Project Management



ACTIVITIES & MEMBERSHIPS

Participant — The Duke of Edinburgh's International Award (Bronze Level)

Daffodil International University

January 2026 – Present

Actively participating in the internationally recognized Duke of Edinburgh's Award programme at the Bronze level:

- **Skill Development:** AI Agent Development — building intelligent, autonomous AI systems
- **Physical Recreation:** Gym Training — maintaining physical fitness through disciplined routines
- **Voluntary Service:** Contributing to community education through a personal blog (voice-of-ratul.vercel.app)

Executive Member — Research & Journal Wing

DIU Computer & Programming Club

- Engaging in structured AI research activities and theoretical foundation building
- Contributing to academic publications and research initiatives

Executive Member

Daffodil AI Club

- Active participant in AI community building, practical development workshops, and club operations
- Developed and deployed **D.A.I.C** — the club's official virtual AI assistant, powered by RAG and voice recognition
- Collaborating on emerging AI/ML projects and knowledge-sharing initiatives



HOBBIES & INTERESTS



Reading



Chess



Football



Poetry



REFERENCES

Ms. Fahmi Hasan

Senior Administrative Officer — Daffodil International University

Duke of Edinburgh's Award Leader

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Mr. Mehadi Hasan (MHN)

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