

Muhammad Sabbir Hossain

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Summary

UIU CSE Graduate with a strong academic and research profile – undergraduate thesis on ML/NLP; peer-reviewed publication on deep learning; and active roles as teaching assistant, UIUCPC mentor, and co-founder of UIU Scholars Squad. Competitive programmer (Codeforces Specialist, 2500+ problems solved) with broad full-stack and systems-level engineering experience.

Education

B.Sc. in Computer Science & Engineering

Jun 2021 – Dec 2025

United International University (UIU), Dhaka, Bangladesh

Overall CGPA: 3.91 / 4.00

- CS Core CGPA: 3.96 / 4.00

Experience

Co-Founder & Instructor

Sept 2022 – Present

UIU Scholars Squad (UIUSS), Dhaka, Bangladesh

- Co-founded and led an educational outreach initiative delivering live sessions on core CS topics, reaching over **3,000** students.
- Designed structured learning modules to strengthen students' foundations in programming, data structures, and algorithms.

Mentor & Judge

Jan 2025 – Present

UIU Competitive Programming Community (UIUCPC), Dhaka, Bangladesh

- Mentored 100+ students in algorithmic problem-solving and competitive programming.
- Led problem-setting and judging for multiple intra-university contests, fostering a competitive programming culture.

Undergraduate Teaching Assistant

Jun 2024 – Oct 2024

United International University (UIU), Dhaka, Bangladesh

- Conducted lab sessions, evaluated coursework, and provided academic guidance in programming and data structures.
- Supported students in improving coding proficiency through interactive mentoring.

Thesis & Publications

Bangladeshi Dialect Speech Recognition – Undergraduate Thesis

PyTorch, Transformers, LoRA, NLP

- Developed an advanced speech recognition system for Bangladeshi dialects using multimodal NLP and audio data, bridging regional communication gaps.
- Applied transformer-based architectures and LoRA fine-tuning for dialect adaptation, achieving high accuracy and real-time performance.

Bangladeshi Rice Grain Classification – Peer-reviewed Publication

PyTorch, OpenCV, Image Processing, Transfer Learning

- Developed a CNN-based rice grain classification model with a custom-curated dataset, OpenCV preprocessing, and transfer learning techniques.

Projects

Nostalgia – Social Media Platform for Elderly Users

 GitHub

Django, Node.js, MongoDB, MySQL, HTML/CSS/JS, Microservices

- Developed NID-based identity verification with facial recognition and ML-driven recommendations for friends, posts, and blogs.
- Secured real-time communication using Node.js, Socket.IO, JWT, and two-step authentication.

Caregivers – Platform for Compassionate Support

 GitHub

Django, JavaScript, Bootstrap, MySQL, NLP

- Built a full-stack caregiver platform with task scheduling, approvals, chat, calendar, chatbot, and email verification.

- Developed advanced multi-criteria search, autocomplete, and administrative management features.

Skills

Languages: C++, Python, Java, JavaScript, TypeScript, C#
Frameworks: Django, React, Node.js, .NET Core, PHP
Backend/APIs: REST APIs, WebSockets, Microservices, System Design
Databases: PostgreSQL, MongoDB, Kafka, MySQL
AI/ML: PyTorch, YOLO, OpenCV, Hugging Face, RAG
DevOps/Tools: Docker, AWS (EC2, RDS, S3, Lambda), Linux, Agile, Git

Competitive Programming

Codeforces Solved: **1900+** | Max Rating: **1578 (Specialist)** handle: pagol

CodeChef Solved: **100+** | Max Rating: **1854 (4-Star)** handle: sabbir772

- Participated in ICPC Asia Dhaka Regional 2024 & 2025.

Achievements

UIU CSE Project Show 2022–2024

1st in Advanced OOP; 2nd in System Analysis & Design; 3rd in DBMS & SEL

ICPC Asia Dhaka Regional 2024–2025

Participated 2× (2024, 2025);

ML Olympiad 2024 (10th) | IUPC Ranks 2024–2025

BUBT 23rd, MU 42nd, KUET 50th;

Top-20 National Individual Ranks 2023–2025

Multiple top-20 national individual ranks; 10+ onsite and 250+ online national & international competitions.

Languages

Bengali (Native), English (Fluent)