Zisan Mahmud

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zisan23 Google Scholar ORCID

Education

M.Sc. **University of Dhaka** 2026 – Present
- Department of Computer Science and Engineering

B.Sc. **University of Dhaka** 2022 – 2026
- Department of Computer Science and Engineering
- CGPA: 3.75 / 4.00

HSC **Notre Dame College**, Dhaka 2018 – 2020
- Science
- GPA: 5.00 / 5.00

Publications

Journal Articles

- Md. Tanvir Alam, Md Mahmudur Rahman, Md. Fahim Arefin, Chowdhury Farhan Ahmed, **Zisan Mahmud**, Md. Sadman Sakib, and Carson Leung. "Hyperedge Anomaly Detection with Hypergraph Neural Network." *Transactions on Machine Learning Research (TMLR)*, 2026.

Conference Publications

- Md. Sadman Sakib, **Zisan Mahmud**, Md. Fahim Arefin, and Md Fahim. "BanglaMemeX: Advancing Cultural Metaphoric Image Interpretation in Bangla with a Multimodal Explainable Dataset." *Findings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2026.

Research Experience

Undergraduate Thesis - Advancing Cultural Metaphoric Image Interpretation in Bangla with a Multimodal Explainable Dataset Mar 2025 - Jun 2026
Supervisor: Md. Fahim Arefin, Lecturer, Dept. of CSE, University of Dhaka
- Conducted undergraduate thesis research on Bangla meme understanding, focusing on multimodal metaphor reasoning and culturally grounded interpretation in a low-resource language setting.
- Co-authored *BanglaMemeX: Advancing Cultural Metaphoric Image Interpretation in Bangla with a Multimodal Explainable Dataset*, accepted to **Findings of EMNLP 2026**.

Political Meme Classification - CUET CSE Fest Data Challenge Dec 2025
Top 10
- Fine-tuned vision language models (Qwen 3, Gemma 3) with LoRA for multimodal classification of political memes.
- Applied GRPO based reinforcement post-training to further boost prediction quality.

Bengali Regional Dialect Speech Recognition - Bengali.AI: IUT Challenge Apr 2024
Placed 8th of 47 teams
- Fine-tuned OpenAI Whisper for Bangla regional-dialect speech recognition on recordings from 373 speakers across ten regions of Bangladesh, including data curation and transcript normalization.
- Performed region-wise classification to identify a speaker's dialect region from audio.

Research Interests

Artificial Intelligence, Natural Language Processing, Data Mining

Professional Experience

Adjunct Lecturer, Department of Computer Science and Engineering — Sep 2026 - Present
International Islamic University Chittagong

- Teach undergraduate **Computer Algorithms** theory and lab courses.

Machine Learning Executive — Apr 2026 - Jun 2026
EVOLIQ Tech

- Built **machine learning** models for **time-series forecasting** on confidential datasets.

Projects

CSEDU Departmental Web Portal *(2025)* — GitHub | YouTube

- Designed and developed the official web portal of the Dept. of CSE, University of Dhaka, serving students, faculty, and visitors. *(React.js, FastAPI, MySQL)*

FunFuzz AR Learning Platform for Kids *(2024)* — YouTube

- Built an EdTech platform using Augmented Reality (3D/GLB) to make learning interactive for children. *(React.js, Spring Boot, PostgreSQL)*

PastryTreat *(2023)* — GitHub | YouTube

- Android food ordering and delivery app connecting users with restaurants. *(Java, Android, Firebase)*

Achievements & Awards

- **Best UI/UX Design**, BUET CSE Fest Hackathon — Jan 2026
- **Top 10, Political Meme Classification Challenge**, CUET CSE Fest — Dec 2025
- **8th of 47 teams**, Bengali.AI-IUT Regional ASR Challenge — Apr 2024
- **General Scholarship**, HSC — 2020
- **General Scholarship**, SSC — 2018

Training

- **International Summer School 2025 — IIT Bombay** — Jul 2025
  Completed a course on “Group Testing: An Important Tool for Data Science” under Prof. Ajit Rajwade, IIT Bombay. Gained insights into theoretical foundations and real-world applications of group testing in data science.

Skills

Languages: Python, C, C++, Java
ML/NLP: PyTorch, Scikit-learn, Hugging Face
Data Tools: NumPy, Pandas, Matplotlib, Jupyter Notebook
Frameworks: FastAPI
Databases: MySQL, PostgreSQL
Tools: Git, Docker, Linux, LaTeX