

S M Jishanul Islam

Part-time Faculty

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RESEARCH INTERESTS

Multi-modal Learning – Multi-modal Representation – Multi-modal Understanding – Multi-modal AI Applications.

EDUCATION

United International University, Dhaka, Bangladesh

B.Sc. in Computer Science and Engineering (**Major**: Data Science)

Distinction: *Cum Laude*

Supervisor: Prof. [Dr. Swakkhar Shatabda](#)

2020 — 2024

CGPA: 3.77/4.00

Major CGPA: 4.00/4.00

EXPERIENCE

United International University

Part-time Faculty

Dhaka, Bangladesh

October 2025 — Present

- Taking core applied CS courses as a faculty from the industry, focusing on algorithms and software engineering.
- Collaborating with the department of CSE to grade, provide feedback, and report student performances and provide industry insights to improve courses.
- Communicating with TAs for course materials creation and course outline building.

Apurba Technologies Ltd.

Software Engineer

Dhaka, Bangladesh

December 2024 — October 2025

- Built scalable and optimized core ML services, improving performance by 10%.
- Co-created the first CLIP-style word recognizer for VLM-based Bengali OCR, recording an accuracy of 95%+.
- Collaborated with stakeholders to implement, research, and complete project deliverables 2-3 weeks before the deadline.

United International University

Lecturer (contractual)

Dhaka, Bangladesh

June 2024 — October 2024

- Taught core CS concepts to students.
- Took exams to monitor students' performance to provide informative feedback, improving average performance by 7%.
- **Courses conducted:** Object-Oriented Programming Lab, Data Structures and Algorithms 1 Lab, and Database Management Systems Theory.

United International University

Undergraduate Assistant

Dhaka, Bangladesh

September 2023 — May 2024

- Managed to facilitate course content and materials with the lab faculty, checked and evaluated assessments, and judged lab projects.
- Created the first course materials for the country's first-ever undergraduate degree in Data Science.
- **Courses supervised:** Programming for Data Science, and Object-Oriented Programming for Data Science.

PUBLICATIONS

Journals

- **Islam, S. M.**, Mustakim, S. H., Hossain, M., Mashira, M., Shourav, N. I., Ahmed, M. R., Islam, S., Islam, A. K. M., & Shatabda, S. "An audio video-based multi-modal fusion approach for speech emotion recognition.", **Knowledge-Based Systems (Elsevier)**, Q1, I.F 7.6, 2026.

Conferences

- **Islam, S. M.**, Hassan, M., Ovi, M. H., Rabby, A. K. M., & Rahman, F. 2026. BornoDrishti: Leveraging Vision Encoders and Domain-Adaptive Learning for Bangla OCR on Diverse Documents. In the 19th Conference of the European Chapter of the Association for Computational Linguistics (EACL) Industry Track. ACL.
- Hassan, M., **Islam, S. M.**, Rabby, A. K. M., & Rahman, F. 2025. Beyond Characters: Position-Aware Metric and a Lightweight LLM for Low-Resource Bangla Punctuation Restoration. In 2025 IEEE International Conference on Big Data (BigData). IEEE.
- Ahmmed, S., **Islam, S. M.**, Mustakim, S. H., Islam, R., Shanto, S. K., and Islam, S., "IPBlocks: A Blockchain Ecosystem for Secure IP Registration and Decentralized Marketplace," TENCN 2025 - 2025 IEEE Region 10 Conference (TENCN). IEEE.
- Ahmmed, S., Rahman, T., **Islam, S. M.**, Reyad, A. M., Dey, S., & Farid, D. M. (2024, May). E-MedViTR: Enhanced Vision Transformers with Registers for Biomedical Image Classification. In 2024 6th International Conference on Electrical Engineering and Information & Communication Technology (ICEEICT) (pp. 664-669). IEEE.

Workshops

- Mustakim, S. H., **Islam, S. M.**, Muna, U. M., Chowdhury, M., Islam, M. J., Ahmmed, S., Sikder, T., Dhruvo, S. T. A., & Shatabda, S. (2025). Watch, Listen, Understand, Mislead: Tri-modal Adversarial Attacks on Short Videos for Content Appropriateness Evaluation. Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV) Workshops, 2025, pp. 2955-2964.

- **Islam, S. M.**, Mustakim, S. H., Ahmmed, S., Sayeedi, M. F. A., Khandoker, S., Dhrubo, S. T. A., & Hossain, N. (2024). MIMIC: Multimodal Islamophobic Meme Identification and Classification. 3rd **Muslims in ML Workshop – NeurIPS**, 2024.

NOTABLE RESEARCH PROJECTS

Bangla Optical Character Recognition (OCR) Project

- **Associated role:** Software Engineer, Apurba Technologies Ltd.
- Worked on a new Vision-Language-based architecture for Bengali OCR and document reconstruction. Worked on methods to fine-tune and deploy VLMs to improve OCR for the Bengali language, and worked on punctuation restoration and document structure restoration. Several sub-works are under review, with one work already accepted at IEEE BigData 2025. URL to the project: <https://ocr.bangla.gov.bd/>. URL to the chat-based OCR model: <https://kagoj.ai/>.

NOTABLE PROJECTS

NurtureAid (github.com/sadia-ahmmed/AgeWell-Frontend)

Built a real-time AI-based mobile application that simplifies care through caretakers. Led the app’s backend and frontend development as a full-stack engineer.

Tech Stack: React Native, Node.js, Flask, MongoDB, Firebase, LLaMA-Index, PyTorch.

Acknowledgements: Champion of the UIU CSE Project Show, Software Engineering Laboratory; Champion of the Hult Prize OnCampus round in UIU; Selected for the Hult Prize Summit in Boston.

Haven (github.com/S-M-J-I/Haven-Harvard-Hsil-Hackathon-2025)

Created a BCI-powered mental health speech-to-speech conversational agent that understands and responds with emotion. Led the app’s backend, frontend, and AI development as a full-stack engineer.

Tech Stack: Python, OpenAI, Emotiv, Firebase, Streamlit.

Acknowledgements: Winner, Harvard HSIL Hackathon Dhaka Hub 2024

IPBlocks (github.com/S-M-J-I/ipblocks-blockchain)

Developed a web3 dApp that helps users protect, license, and commercialize Intellectual Property (IP) through blockchain technology. Led the development of the app’s backend, frontend, and blockchain development as a full-stack engineer.

Tech Stack: HTML, CSS, JavaScript, PHP, PostgreSQL, Solidity, Truffle, Ganache.

Acknowledgements: Gold Award (Champion) at the International Blockchain Olympiad 2023.

BhaShammo (<https://github.com/S-M-J-I/bhashammo-dgt-regional-bengail-2-ipa>)

Solving the unique problem of IPA Transcription of Bengali Regional Dialects using Dialect Guided Tokens.

Tech Stack: Python, Hugging Face, PyTorch.

Acknowledgements: Champion of the Bhashamul national NLP datathon.

SKILLS

Programming: C, C++, Java, Python, JavaScript, PHP, SQL, Solidity.

Machine Learning: PyTorch, Tensorflow, Scikit-Learn, Matplotlib, Numpy, Pandas, NLTK, HuggingFace.

Frameworks/Libraries: React.js, Node.js, Spring Boot, FastAPI, Firebase.

DevOps Tools: Git, GitHub, Docker.

Soft Skills: Communication, Leadership, Design Thinking, Public Speaking, Team Player.

ACHIEVEMENTS

Winner, Harvard Health Systems Innovation Lab Hackathon 2025 (Dhaka Hub)	2025
Academic Excellence Scholarship	2020 — 2024
Gold Award (Champion), International Blockchain Olympiad (IBCOL) 2023	2023
Champion, Bhashamul: Bengali Regional Text to IPA National NLP Datathon	2024
Champion, Hult Prize OnCampus Round	2024
Summit Participant, Hult Prize Summit in Boston, USA	2024
Silver Award(1 st Runner Up), Bangladesh Blockchain Olympiad (BCOLBD) 2023	2023
1 st Runner Up, Intra-University Deep Learning Sprint	2023
Finalist, ICT Innovation Grant (for NurtureAid)	2023
Champion, Software Engineering Lab	2023
Champion, Database Management Systems Lab	2022
Champion, Advanced Object Oriented Programming Lab	2022

EXTRA CURRICULARS

UIU Computer Club - served as the General Secretary 2022 — 2024

Triumph of IBCOL 2023 and the Future of Blockchain in Bangladesh by Jamuna TV - [interview link](#).

Trainer, Hands-on Workshop on Automatic Speech Recognition by Bengali.AI and IUT Computer Society - [workshop link](#).

Trainer, Hands-on Workshop on building a dApp from scratch by UIU Computer Club - [workshop link](#).