

Md Ataulha Saim

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[GitHub](#) | [LinkedIn](#) | [Google Scholar](#)

EDUCATION

Shahjalal University of Science and Technology Bachelor of Science in Computer Science and Engineering	Feb. 2019 – Feb. 2024 CGPA: 3.74/4.00
Notre Dame College, Dhaka Higher Secondary School Certificates	Jun. 2016 – Jan. 2018 GPA: 5.00/5.00 (Scholarship)
Shamsul Hoque Khan School and College, Dhaka Secondary Secondary School Certificates	Jan. 2009 – Feb. 2016 GPA: 5.00/5.00

WORK EXPERIENCE

Lecturer, Department of CSE <i>Green University of Bangladesh, Dhaka</i> <ul style="list-style-type: none">Delivering undergraduate courses in Machine Learning, Data Mining, Operating Systems, Object-Oriented Programming, Integrated Design Project, and Computational Thinking.Courses taught: CSE 411/412: Machine Learning (Theory & Lab), CSE 435/436: Data Mining (Theory & Lab), CSE 406: Integrated Design Project II, CSE 310: Operating System Lab, CSE 202: Object-Oriented Programming Lab, CSE 100: Computational Thinking .Co-supervising and mentoring 5+ thesis groups on topics including Speech Processing, Large Language Model Evaluation, and Natural Language Processing.Advising project teams on applied AI, including the development of a medical image diagnosis system.	Jan 2025 – Present
Synesis IT <i>AI Engineer</i> <ul style="list-style-type: none">Designed and developed the initial version of the Bangladesh Election Commission Voicebot Automation Project 105, enabling an AI-powered callbot to handle NID and election-related queries.Enhanced SIT-ASR capabilities to accurately recognize out-of-vocabulary (OOV) English words.Implemented Pyannote-based speaker diarization to address the “Who spoke, when” problem within the SIT-ASR pipeline.Built and deployed Azure-hosted MLM-based chatbot and a custom LLM-powered knowledge chatbot to support automated user Q&A.Integrated English ASR into the SIT-ASR system, expanding its multilingual processing capacity.Developed real-time closed captioning system for both Bangla and English using ASR.Contributed to improvements in the SIT Convay denoiser for speech quality enhancement.	Mar 2024 – Feb 2025

RESEARCH EXPERIENCE

Low-Resource Text-to-Speech Synthesis (Thesis) <i>TTS, VITS-TTS</i> <ul style="list-style-type: none">Developing a large TTS corpus of more than 15 hours for the Sylheti Nagri language under the supervision of Prof. Dr. M. Shahidur Rahman.Implemented CVAE architecture-based VITS-TTS model.	
Forecasting Dengue Cases <i>Time Series Analysis, Prophet Model</i> <ul style="list-style-type: none">Published in the Computers in Biology and Medicine (Elsevier) Journal, Impact Factor: 7.7.Co-authored a section by implementing the Meta Prophet model for Dengue time series data, focusing on daily case forecasting.DOI: doi.org/10.1016/j.combiomed.2024.108707	
Real-time Object Detection <i>YOLOv8</i> <ul style="list-style-type: none">Led the creation of the largest Bangladeshi bird image dataset for real-time detection by implementing YOLOv8 as the baseline model.Published at ICCIT 2023.DOI: 10.1109/ICCIT60459.2023.10441421	
Image Classification <i>Vision Transformer, S2S+Attention</i> <ul style="list-style-type: none">Led the creation of the largest Bangladeshi fish image dataset for image classification using Vision Transformer.Published in ICEEICT 2024.DOI: 10.1109/ICEEICT62016.2024.10534462	

Bengali Document Layout Analysis | *Detectron2*

- Detectron2-based Bengali Document Layout Analysis comparison on the BaDLAD dataset.
 - DOI: [10.48550/arXiv.2308.13769](https://doi.org/10.48550/arXiv.2308.13769)
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Low-Resource Machine Translation | *Transformer, S2S+Attention*

- Co-authored the research by implementing Transformer and Seq2Seq+LSTM models for Hajong ↔ Bangla MT.

Air Quality Index Forecasting | *Time Series Analysis, Prophet Model*

- Led and supervised Meta Prophet model-based AQI forecasting with time series data, focusing on daily AQI predictions.

FEATURED PROJECTS

StarGaze BD | *ML Algorithms (RF, SVM, LR), CNN, Flask, JavaScript, Streamlit*

[GitHub Link](#)

- Developed a web app using ML and DL to identify and provide details of famous Bangladeshi personalities from photos.
- Led the entire project development, excluding data collection, covering both statistical modeling and deep learning modules.

Freshman Utilities | *Java, Firebase, Google Directions API, Jsoup*

[GitHub Link](#)

- Developed an android app to facilitate information sharing and campus navigation for university freshmen.
- Implemented signup, verification, profile management, contact extraction, FAQ, map navigation, and media upload features.

CourseTrackr | *Java, Servlet, JSP, MySQL*

[GitHub Link](#)

- Developed a web based online course management system with user roles for admin, teacher, and student.
- Implemented student and course management sections, including admin, assign course, list view, and course registration.

QuesTek Pro | *Java, JavaFX, Text files*

[GitHub Link](#)

- Developed a desktop quiz application with verified admin capabilities and result export for in-person MCQ exams.
- Led the entire development, including registration, admin and student functions, quiz, and CSV result generation.

US8K-Audio-Clf | *RNN, MFCC*

[GitHub Link](#)

- Implemented a combination of RNN and MFCC for audio classification tasks on the UrbanSound8k dataset.

TECHNICAL SKILLS

Languages: Python, C/C++, Java, JavaScript, SQL (MySQL)

Frameworks: Tensorflow, Torch, Android (Java), React JS, Fast API

Tools: Pandas, Scikit-Learn, Git, Firebase, VS Code, Kaggle, Google Colab, Linux, Azure Cloud

Soft Skills: Project Management, Time Management

ACHIEVEMENTS

- **Kaggle Notebook Expert** (1× Expert). [Kaggle Profile](#)
- Ranked **Top 6%** in the **DL Sprint 3.0 Competition**, part of BUET CSE Fest 2024.
- Achieved **Top 10% (5th)** in the **DL Sprint 2.0 Competition**, part of BUET CSE Fest 2023.
- Achieved **Top 28%** in the **Bengali.AI Speech Recognition Competition**.
- Awarded the **General Grade Government Scholarship** for Outstanding HSC Results.

EXTRACURRICULAR ACTIVITIES

- **Reviewer for ICCIT 2024.**
- Co-supervising **5+ undergraduate teams** on theses involving Deepfake Speech, LLM Math Solving Capabilities, Multi-modal Sentiment, and Nostalgia analysis.
- Assisting **1 Doctoral by Research team** involving Speech-to-Speech translation (English to Bangla) research, with Prof. Dr. M. Shahidur Rahman.
- Mentoring and co-supervising **3+ undergraduate teams** on theses involving Text-to-Speech synthesis, Large Language Model Evaluation and Low Resource NMT.
- Mentored **2+ undergraduate teams** on Bangladeshi regional audio classification and ethnic language-based text-to-speech synthesis systems as part of my undergraduate thesis.
- Participated in **ICT Ministry-sponsored training** on UE4-based mobile game and app development.
- Co-hosted the **DL Enigma 1.0 Competition**, part of SUST CSE Carnival 2024.

REFERENCES

Dr. Mohammad Shahidur Rahman

Professor

Department of Computer Science and Engineering

Shahjalal University of Science and Technology, Sylhet, Bangladesh

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Mobile: +880 1914-930807

Relation: Thesis Supervisor and Mentor

Project Involvement: Currently Actively Involved in 2+ Research Projects Under his Guidance

Dr. Mohammad Forhad Rabbi

Professor

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