# Md Tanvir Rouf Shawon

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ResearchGate: https://www.researchgate.net/profile/Md-Shawon-6
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## Research Interests

Natural Language Processing, Health Informatics, Large Language Models, Machine Learning Application, Explainable Artificial Intelligence.

## Education

**George Mason University** — **Fairfax, Virginia, USA**
*Ph.D. in Computer and Information Sciences* — *August 2024 - Current*

**Ahsanullah University of Science and Technology** — **Dhaka, Bangladesh**
*B. Sc. in Computer Science and Engineering* — *2016 - 2021*
**CGPA: 3.934** on a scale of 4.00 ($1^{st}$ in Merit Position)

**Notre Dame Colege, Dhaka** — **Dhaka, Bangladesh**
*Higher Secondary Certificate* — *2013 - 2015*
GPA: 5.00 on a scale of 5.00

## Research Grant

**(CO-PI)** Bengali Fake Review: A Benchmark Dataset and Detection System.                2022
Internal Research Grant supported by Committee for Advance Studies and Research (CASR), AUST

## Publications

(* denotes equal contribution)

o **Md. Tanvir Rouf Shawon**, G. M. Shahariar Shibli, Farzad Ahmed & Sajib Kumar Saha Joy ”**Explainable cost-sensitive deep neural networks for brain tumor detection from brain MRI images considering data imbalance**” in *Multimedia Tools and Applications, Springer, 2025*

o G. M. Shahariar Shibli*, **Md. Tanvir Rouf Shawon***, Faisal Muhammad Shah, Mohammad Shafiul Alam & Md. Shahriar Mahbub **”Bengali Fake Reviews: A Benchmark Dataset and Detection System”** in *Neurocomputing, Elsevier, 2024*

o Kazi Elahi, Tasnuva Rahman, Shakil Shahriar, Samir Sarker, **Md. Tanvir Rouf Shawon**, and G. M. Shibli **”A Comparative Analysis of Noise Reduction Methods in Sentiment Analysis on Noisy Bangla Texts”** in *9th Workshop on Noisy and User-generated Text (W-NUT 2024), EACL, 2024*

o G. M. Shahariar Shibli, **Md. Tanvir Rouf Shawon**, Anik Hassan Nibir, Md. Zabed Miandad & Nibir Chandra Mandal **”Automatic back transliteration of Romanized Bengali (Banglish) to Bengali”** in *Iran Journal of Computer Science, Springer, 2023*

o **Md. Tanvir Rouf Shawon**, G. M. Shahariar Shibli, Faisal Muhammad Shah, Mohammad Shafiul Alam & Md. Shahriar Mahbub **"Bengali Fake Review Detection using Semi-supervised Generative Adversarial Networks"** in *5th International Conference on Natural Language Processing (ICNLP), Guangzhou, Chaina, IEEE, 2023*

o **Md Tanvir Rouf Shawon\***, Raihan Tanvir\* & Md. Golam Rabiul Alam **"Bengali Handwritten Digit Recognition using CNN with Explainable AI"** in *4th International Conference on Sustainable Technologies for Industry 4.0 (STI), Dhaka, Bangladesh, IEEE, 2022*

o Raihan Tanvir\*, **Md Tanvir Rouf Shawon\***, Md Humaion Kabir Mehedi, Md Motahar Mahtab & Annajiat Alim Rasel **"A GAN-BERT Based Approach for Bengali Text Classification with a Few Labeled Examples"** in *Distributed Computing and Artificial Intelligence, 19th International Conference, L'Aquila, Italy, Springer, 2022*

o **MD Tanvir Rouf Shawon\***, Raihan Tanvir\*, Humaira Ferdous Shifa, Susmoy Kar & Mohammad Imrul Jubair **"Jamdani Motif Generation using Conditional GAN"** in *23rd International Conference on Computer and Information Technology (ICCIT), Dhaka, Bangladesh, IEEE, 2020*

## Conference Presentation

o Bengali Fake Review Detection using Semi-supervised Generative Adversarial Networks, *5th International Conference on Natural Language Processing (ICNLP)*, Guangzhou, Chaina. [Presentation link: `https://youtu.be/rd5N6z5-HOU`]                    March 24-26, 2023
o Effectiveness of Transformer Models on IoT Security Detection in StackOverflow Discussions, *1st International Conference on Information and Communication Technology for Development*, Khulna, Bangladesh.[Presentation link: `https://youtu.be/Y4ntugjHEGM`]                    July 29-30, 2022

## Teaching Experience

**Ahsanullah University of Science and Technology (AUST)**
*Lecturer*                    *June 2021 - July 2024*
Department of Computer Science & Engineering
*Courses: Soft Computing, Pattern Recognition, Algorithms, Object Oriented Programming*

## Ongoing Projects

o Neural Machine Translation for Bengali Dialect
o Detection of Online Grooming/Predatory Chats
o Bengali Intent Classification with Generative Adversarial BERT
o Brain Tumor Detection with Cost-Sensitive Neural Network
o Report Generation from Medical Images
o Segmentation of Retinal Blood Vessels using Cutting Edge Segmentation Model
o Medical Image Classification using Federated and Semi-Supervised Learning

## Awards & Achievements

o Dean's List of Honor, AUST                    2021
o Government Scholarship, Sylhet                    2010, 2013
o I-Genius, Grameenphone Prothom Alo Internet Festival                    2013

## Skills

- **Programming Language:** $C, C++, Java, Python, JavaScript, PHP, HTML, CSS$
- **Frameworks:** LangGraph, LangChain, PyTorch, Keras, Tensrflow
- **Database:** MS SQL, MySQL, SQLite, Oracle PL SQL
- **Graphics API/Plotting Library:** WebGL, Matplotlib
- **Version Control System:** Git

## Professinal Activities

- Co-opt member (Extra Curricular Activities) - AUST CSE SOCIETY
- Coach, Aust_0Degree & AUST_Samakal: ICPC Asia Dhaka Regional Onsite Contest
- Advisor of Cefalo CodeFiesta 2022: AUST Inter-University Programming Contest
- Organizer of Intra-AUST Programming Contest Spring 2019

## Reference

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