ANIK SEN

+60 11 126 79199 | anik.sen.42138@gmail.com

in LinkedIn | ○ GitHub | G | Google Scholar 🌐 Website

Malacca, 75450, Malaysia

ABOUT ME

I am pursuing my **Master of Computing** (By Research) at **Multimedia University**, Melaka, Malaysia, with an expected completion in March 2026. I am working on an FRGS-funded research project as a **Graduate Research Assistant**. I completed my Bachelor of Science in **Computer Science & Engineering**, specializing in Software Engineering, at **American International University-Bangladesh (AIUB)**. My research interest areas are **Information Security, Machine Learning, Federated Learning, and Cryptography**.

WORK EXPERIENCE

- **Graduate Research Assistant** *05/2024 - Current*
  Multimedia University Melaka, Malaysia
  Responsibilities include:
  - *Conducting research on privacy-preserving machine learning to secure data sharing in Federated Learning settings.*
  - *Integrating cryptographic techniques, including Homomorphic Encryption, to enhance data privacy.*
  - *Exploring applications of Generative AI and Large Language Models (LLMs).*
- **Computer Science Teacher** *09/2023 - 02/2024*
  Canadian Trillinium International School | *[LOR by Course Coordinator]* Dhaka, Bangladesh
  Teaching Area:
  - *Programming in Python (Grade 9)*
  - *Programming in C++ (Grade 10)*
  - *Cyber Security & Technical Support (Grade 11 & 12)*
- **Research Assistant** *09/2023 - 01/2024*
  Artificial Intelligence Research and Innovation Lab (AIRIL) Dhaka, Bangladesh
- **Cloud Computing Trainee** *06/2023 - 09/2023*
  eTech Solution Ltd. | *[Completion Certificate]* Dhaka, Bangladesh

EDUCATION

- **Master of Computing (by research)** *2024 - Current*
  Multimedia University Melaka, Malaysia
  - Thesis: Secure Data Sharing: Innovations in Hybrid Machine Learning and Cryptography
- **Bachelor of Science in Computer Science and Engineering (CSE)** *2020 - 2023*
  American International University-Bangladesh (AIUB) Dhaka, Bangladesh
  - **CGPA: 3.94 out of 4.00** [Dean's List Honor - Five Times] | *[Certificates & Transcripts]*
  - Thesis: Innovative Techniques of Data Sharing and Security for Anomaly Detection Using Novel Machine Learning Techniques
- **Higher Secondary School Certificate (HSC)** *2016 - 2018*
  Sreemangal Government College Sreemangal, Bangladesh
  - GPA: 4.83 out of 5 | *[Certificates & Transcripts]*

PUBLICATIONS C=CONFERENCE, J=JOURNAL, S=IN SUBMISSION, U=UNDER PUBLICATION

[J.1] **A comprehensive Review of Cryptographic Techniques in Federated Learning for Secure Data Sharing and Applications**. *IEEE Access, doi: 10.1109/ACCESS.2025.3593953.* [**Q1**, Scopus indexed].

[J.2] **Preventing Student's Mental Health Problems with the Help of Data Mining**. *International Journal of Computing, vol. 23, no. 1, pp. 101-108, Oct. 2024, doi: 10.47839/ijc.23.1.3441* [Q3, Scopus Indexed]

[C.1] **Towards Precision Public Health: Advancing Obesity Prediction with Machine Learning Algorithms**. In *The IEEE International Conference on Industry 4.0, Artificial Intelligence, and Communications Technology (IAICT 2025)*, Bali, Indonesia, 2025, pp. 826-832, doi: 10.1109/IAICT65714.2025.11100376. [Scopus Indexed].

[C.2] **From Data to Diagnosis: Applying Machine Learning for Reliable Heart Disease Prediction**. In *2025 The 5th Asian Conference on Information Engineering (ACIE 2025)*, Phuket, Thailand, 2025, pp. 50-56, doi: 10.1109/ACIE64499.2025.00015. [Scopus Indexed].

[C.3] **Efficient American Sign Language Recognition using ResNet-50**. In *The 11th International Conference on Engineering, Applied Sciences and Technology (ICEAST 2025)*, Phuket, Thailand, 2025, pp. 152-158, doi: 10.1109/ICEAST64767.2025.11088186. [Scopus Indexed].

[C.4] **Identification of Human Movement Through a Novel Machine Learning Approach**. In *2023 Innovations in Power and Advanced Computing Technologies (i-PACT)*, Kuala Lumpur, Malaysia, 2023, pp. 1-5, doi: 10.1109/i-PACT58649.2023.10434296. [Scopus Indexed]

[U.1] **Enhancing DDoS Attack Detection Through Hybrid Ensemble Machine Learning Technique and Explainable AI**. In *The 9th International Conference on Innovation in Artificial Intelligence (ICIAI 2025), NTU, Singapore.*

[U.2] **A Privacy-Preserving Approach to Diabetes Diagnosis Using Artificial Neural Networks and Federated Learning Integrating Homomorphic Encryption**. In *The 5th International Conference on Computer, Information Technology and Intelligent Computing (CITIC 2025), Cyberjaya, Malaysia.*

[S.1] **Automated Fault Detection in Solar Panels: A Custom EfficientNetB0 Model with XAI solution for Real-Time Monitoring**. Submitted and under review at *Discover Applied Sciences*. [**Q1**, WoS and Scopus indexed].

TECHNICAL SKILLS

Programming Languages: C, C++, Java, C#, Python, JavaScript, Php, Rust
Data Science Tools: PyTorch, TensorFlow, NumPy, Scikit-Learn, Matplotlib, OpenCV
Web Development: FrontEnd - HTML5, CSS3, Bootstrap5, JavaScript | BackEnd - ASP.NET
Software Testing tool: Selenium
Database Management: MySQL, MS SQL, PL SQL
Miscellaneous: Git, LaTeX

PARTICIPATION AND CERTIFICATIONS

- **Presenter at International Conferences**
    1. *The 5th International Conference on Computer, Information Technology and Intelligent Computing (CITIC 2025),* **Cyberjaya, Malaysia** | *[Certificate]* — 2025
    2. *The 2025 IEEE International Conference on Industry 4.0, Artificial Intelligence, and Communications Technology (IAICT'2025),* **Bali, Indonesia** | *[Certificate]* — 2025
    3. *2025 the 9th International Conference on Innovation in Artificial Intelligence (ICIAI 2025),* **Singapore** | *[Certificate]* — 2025
    4. *The 11th International Conference on Engineering, Applied Sciences and Technology (ICEAST 2025),* **Thailand** | *[Certificate]* 2025
    5. *The 5th Asian Conference on Information Engineering (ACIE 2025),* **Phuket, Thailand** | *[Certificate]* — 2025
    6. *5th International Conference on Mathematics, Engineering & Industrial Applications (ICoMEIA),* **Langkawi, Malaysia** | *[Certificate]* — 2024

- **Gold Award (two) - iNVENTX - an international innovation exhibition 2025** — 2025
    Winner of two research posters I presented at iNVENTX 2025. These researches are focused on DDoS attack detection using ML and privacy-preserving diagnosis in FL integrating homomorphic encryption, respectively. [Certificate 1], [Certificate 2]

- **1st Runner-Up in Infineon-MMU Innovative Research Poster Competition 2025** (IT-Category) [Certificate] — 2025

- **Finalist - 3-Minute Thesis (3MT) competition 2025 (Master Level - MMU)** [Certificate] — 2025

- **Gold Award - iNVENTX - an international innovation exhibition 2024** — 2024
    Winner of a research poster I presented at iNVENTX 2024. The research focused on predicting human choice preferences in the chatbot arena. [Certificate]

- **CNN Architectures in Industrial Applications** — 2024
    A five-day long training by AI Nusantara in physical mode, ending with a capstone project which is published in IEEE Explore | [Certificate]

- **National Research Fair-2023, CUET, Bangladesh** — 2023
    Participated with a selected research article titled "Revolutionizing Water Quality Assessment in Bangladesh: A Novel Hybrid Model Outperforming Conventional Classifiers." | [Certificate]

- **DUET TechFest 2k23** — 2023
    Winner of the segment of the Idea & Project Exhibition, project titled: Sign Language to Speech Converter. | [Certificate] | [Trophy]

- **Orbitax SUST SWE Technovent 2023 (Brain Station 23 Hackathon)** — 2023
    Successfully passed the first round and participated in the final round at SUST campus for a 36-hour non-stop onsite hackathon. | [Certificate]

- **Cisco IT Essentials** — 2020
    Successfully achieved the student level credential by completing the IT Essentials course. | [Certificate]

HONORS AND AWARDS

- **Magna Cum Laude (Silver Medal)** | *[Qualifications & Criteria]* — 2025
    22nd Convocation, American International University-Bangladesh (AIUB)

- **High Achiever Research Scholarship for Postgraduate Programs** | *[Confirmation Letter]* — 2024
    Multimedia University, Melaka, Malaysia

- **FST Dean's List Honor** — 2023
    American International University-Bangladesh
    ◦ Based on academic excellence. [**Five Times** for Five Consecutive Academic Sessions] | *[Certificates]*

- **Emerging Leader Award 2024** — 2024
    Bangladesh
    ◦ Based on the top-performing academic excellence of undergraduate programs. | *[Certificate]*

- **AIUB Academic Scholarship** — 2021-2023
    American International University-Bangladesh
    ◦ Based on academic results. [Till Last Semester]

EXTRA-CURRICULAR ACTIVITIES

- Campus Ambassador [**Team Lead**] at **ICT Olympiad Bangladesh 2022** (Season 1) | *[Certificate]*
- The Duke of Edinburgh's International Award (**Bronze**)
- Volunteer at **Bangladesh Red Crescent Society** | *[LOR By Chief of the Training & Co-curricular Department]*

REFERENCES

1. **Prof. Ts. Dr. Heng Swee Huay**
   Professor, Faculty of Information Science and Technology, Multimedia University, Malaysia
   Email: shheng@mmu.edu.my

2. **Mr. Tanvir Ahmed**
   Assistant Professor, Faculty of Science and Technology, American International University-Bangladesh
   Email: tanvir.ahmed@aiub.edu