Md. Sakib Bin Alam

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Research Interests

Deep Learning, Data Science, Healthcare, NLP, Sustainable AI

Summary: I aim to contribute to cutting-edge research using advanced machine learning and data analytics, collaborating with interdisciplinary teams to solve complex real-world problems. I aspire to create sustainable applications that enhance quality of life by integrating AI in health informatics and environmental contexts.

Education

M.Sc. in Data Science and AI, Asian Institute of Technology (AIT)	Thailand
GPA: **3.80**/4.0 (86-95% marks)	2022 - 2024
B.Sc. in Computer Science and Engineering, International Islamic University Chittagong (IIUC)	Bangladesh
GPA: **3.95**/4.0	July 2017

Work Experience

Teaching Assistant — Jan 2024 – April 2024 & Jan 2023 – June 2023

Asian Institute of Technology (AIT)
- *'Data Analytics for Business Intelligence'* course (Vietnam Campus).
- *'Business Intelligence and Analytics'* course (Thailand Campus).

Responsibilities: Conducted lab classes, created and graded assignments, evaluated students' progress.

Lecturer — Sep 2018 - Dec 2021

Asian University for Women (AUW), Bangladesh
- Prepared and delivered lectures and conducted lab classes. Prepared quizzes, problem sets, question papers, and graded answer scripts.

Adjunct Lecturer — Oct 2017 - Mar 2018

International Islamic University Chittagong, Bangladesh

Skills

- **Languages**: Python, C/C++, SQL, HTML, CSS
- **Libraries/APIs/Tools**: pandas, numpy, matplotlib, sklearn, PyTorch, Transformers, Tableau

Selected Publications

Peer-reviewed Journal Articles and Conference Proceedings

Total citations >= **169**, h-index: **6,** i-10 index: **5** according to Google Scholar [April 2024]

1. Shams F. Ahmed, **Md. Sakib Bin Alam**, et.al. *"Insights into Internet of Medical Things (IoMT): Data fusion, security issues and potential solutions".* Information Fusion. 2024. **(Q1, IF: 18.6)**. DOI: https://doi.org/10.1016/j.inffus.2023.102060

2. Shams F. Ahmed, **Md. Sakib Bin Alam,** et.al. *"Deep learning modelling techniques: Current progress, applications, advantages, and challenges"*. Artificial Intelligence Review. 2023. **(Q1, IF: 12.0)**. DOI: https://doi.org/10.1007/s10462-023-10466-8

3. Shams F. Ahmed, **Md. Sakib Bin Alam**, et.al. "Industrial Internet of Things enabled technologies, challenges, and future directions". Computers and Electrical Engineering. 2023. **(Q1, IF: 4.3)**. DOI: https://doi.org/10.1016/j.compeleceng.2023.108847

4. **Md. Sakib Bin Alam**, Muhammed J.A. Patwary, Maruf Hassan. *"Birth Mode Prediction Using Bagging Ensemble Classifier: A Case Study of Bangladesh"*. International Conference on Information and Communication Technology for Sustainable Development (ICICT4SD). IEEE. 2021. **(Scopus Indexed)** DOI: 10.1109/ICICT4SD50815.2021.9396909

5. Muhammed J.A. Patwary, Subrina Akter, **Md. Sakib Bin Alam**, A.N.M. Rezaul Karim. *"Bank Deposit Prediction Using Ensemble Learning"*. Artificial Intelligence Evolution. 2021. DOI: https://doi.org/10.37256/aie.222021880

6. Maruf Hassan, **Md. Sakib Bin Alam**, Tanveer Ahsan. *"Emotion Detection from Text Using Skip-thought Vectors"*. 2nd International Conference on Innovations in Science, Engineering and Technology (ICISET). IEEE. 2018. **(Scopus Indexed)** DOI: 10.1109/ICISET.2018.8745615

Manuscripts under review & in progress

1. **Md. Sakib Bin Alam**, Aiman Lameesa. *"Text Summarization Driven By Question Answering Technique"*. 3rd International Conference on Computing Advancements - ICCA 2024. ACM (Scopus Indexed) **[Submitted]**

2. **Md. Sakib Bin Alam**, et. al. *"A Comprehensive Study on Interaction Fidelity and Carry-over Effects in Virtual Reality Environment"*. 3rd International Conference on Computing Advancements - ICCA 2024. ACM (Scopus Indexed) **[Submitted]**

Selected Projects

Unsupervised text summarization by utilizing question-answer signal
o This study seeks to eliminate the necessity for gold references and introduces an unsupervised learning approach to text summarization.
o Utilized QA technique to extract important information from the source.

Fresh From Farm
o Created a database management system to store information about farmers, their products (crops), and customers. Through this system farmers can sell their crops to the customers. The project is done in three different aspects: Relational Database (SQL), NoSQL (MongoDB) and Graph Model (Neo4j).
o Performed data analysis to find significant insights and trends.

Land Use Classification using Satellite Image Dataset (group project)
o Applied custom-built CNNs for land use classification.
o Applied transfer learning to fine-tune pre-trained networks such as AlexNet and ResNet.
o Performed extensive analysis for misclassified images per label, prediction accuracy per label etc.

(Research) Community Services

Reviewer
- Journals**:** Future Generation Computer Systems, Internet of Things, IEEE Access
- Conferences: 14th IEEE ISCAIE, 2024, Malaysia; IEEE ACDSA, 2023, Mahé, Seychelles

Honors and Awards

o **Runner-up** in the Hackathon 'Develop innovative solution for Digital TB management' (Thailand section) organized by AIT and University of Geneva. Acquired 10,000 baht grant. — Aug 2023

o Prestigious **Royal Thai Govt. Scholarship** for my Master's degree at AIT**.** — 2022-2023

o **University Merit Scholarship for Excellent Academic Performance**. International Islamic University Chittagong. — 2013 – 2016