Md. Sakib Bin Alam

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Research Interests

Machine Learning, Deep Learning, Natural Language Processing, Health Informatics, Social Media Analysis, and Business Analytics.

Education

International Islamic University Chittagong — Bangladesh
B.Sc, Computer Science and Engineering — May 2017
GPA: 3.953/4.0

Work Experience

Research Assistant — June 2021 - Present
- Working in the project *"DDoS attack detection and mitigation using Machine Learning Techniques in IoT*" under the supervision of Amina Akhter (Ph.D. Candidate, Macquarie University, Australia)

Instructor — August 2021 - Present
Asian University for Women, Bangladesh
- Prepare and deliver lectures, and conduct lab classes.
- Prepare quizzes, problem sets, question papers, and grade answer scripts.

Junior Instructor — September 2018 - July 2021
Asian University for Women
- Similar duties, as mentioned in the Instructor state.

Adjunct Lecturer — October 2017 - March 2018
International Islamic University Chittagong, Bangladesh
- Similar duties, as mentioned in the Instructor state.

Publications (Peer-reviewed)

1. **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. DOI: 10.1109/ICICT4SD50815.2021.9396909

2. 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). DOI: 10.1109/ICISET.2018.8745615. IEEE. 2018 **[Best Paper Award]**

Poster Presentation

1. **Md. Sakib Bin Alam**, Muhammed J.A. Patwary. *"Prediction of Childbirth Mode with Suitable Features: A Case Study of Bangladesh".* 2nd International Conference on Sustainable Technologies for Industry 4.0 (STI). IEEE. 2020.

Research Experience

Applications, advances, and challenges of Deep Learning models in Health Informatics
Mentor: Shams Forruque Ahmed, Associate Professor, Asian University for Women
- A review paper on deep learning models, their applications, and limitations has been generated using 100 plus research papers.
- Working to develop a novel approach for birth mode (cesarean/normal) prediction using deep learning techniques.

DDoS attack detection and mitigation using Machine Learning techniques in IoT

Mentor: Amina Akhter, Ph.D. Candidate, Macquarie University, Australia

- Working to develop an intelligent system by applying machine learning techniques to detect and mitigate DDoS attacks in IoT.
- Writing a review paper to compare and analyze the state-of-art in this domain.

Honors and Awards

- **University Merit Scholarship for Excellent Academic Performance**. Autumn 2013 – Autumn 2016
  International Islamic University Chittagong.
- **Best Paper Award**. 2nd IEEE ICISET 2018

Technical Skills

- **Languages**: Python, MATLAB, Java, C/C++, SQL, HTML, CSS
- **ML Tools**: pandas, numpy, matplotlib, sklearn, tensorflow, keras
- **Other Tools**: Git, Github, Jupyter Notebook, Mendeley

Relevant Projects

Fake News Prediction Using Logistic Regression

- Built a predictive model for fake news detection by applying Logistic Regression algorithm.
- Dataset was collected from Kaggle and contained 20,000 data.

Customer Segmentation using K-Means Clustering

- Achieved customer segmentation by analyzing a shopping mall dataset to understand the target customers so that the knowledge can be given to the marketing team and plan the strategy accordingly.
- Applied K-Means Clustering method.

Parkinson's Disease Detection using Support Vector Machine

- Built a Machine Learning System that can detect Parkinson's Disease. In this case, Support Vector Machine model was used on 'Oxford Parkinson's Disease Detection Dataset'.

Stock Management

- Built a web application by which users can manage portfolios of stocks. This allows users to check real stocks' actual prices, and via this app, they can buy and sell stocks.
- Python, CSS, and HTML were used to develop the application.

Course Instructed (undergraduate level)

- Computer Programming Languages
- Computer Architecture
- Computer Algorithms
- CS50 (online course)

Leadership Skills

- Besides teaching, I work as a Student Advisor. As an advisor, I regularly monitor students' performance and help them to develop individual study plans.
- I am working as a Mentor at the AUW AI Club. Here I guide students about AI tools, make problem sets to evaluate them, and arrange workshops.
- I was an active member of the IIUC Computer Club. I served as Social Welfare Secretary, Assistant Social Welfare Secretary, and Assistant Programming Contest Secretary.
- I worked as a Class Representative for eight consecutive semesters during my undergraduate study.

References

- **Amina Akhter**, Ph.D. Candidate, Macquarie University, Email: amina.akhter@students.mq.edu.au
- **Shams Forruque Ahmed**, Associate Professor, Asian University for Women, Email: shams.ahmed@auw.edu.bd