A.H.M Nazmus Sakib

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Objective

Teaching/Research Assistantship for the pursuit of graduate studies

Education

B.Sc in Electrical and Electronic Engineering **January 2018 – February 2023**
***Major**:Computer, **Minor**:Communication* *University of Dhaka*
CGPA: 3.41/4.00
Senior Design Project: Human Activity Recognition using Wi-fi Channel State Information

Standardized Test Score(s)

- **IELTS**: 8.5 (Reading-9, Listening-9, Speaking-7.5, Writing-7.5)
- **GRE**: Verbal-161, Quant-168 , AWA-4.5

Research Interests

- Signal Processing
- Machine Learning
- Cybersecurity
- Wireless Sensing
- Computer vision
- Deep Learning

Relevant Coursework

- Intelligent Systems
- Digital Signal Processing
- Linear Algebra
- Electronics(Analog, Digital)
- Computer Programming
- Statistics and Probablity
- Computer Network
- Signals and Systems
- Calculus

Research Experience

Research Assistant **March 2022 – September 2022**
Supervised by:Dr. Md. Shafiul Alam *FabLab, University of Dhaka*

- Creation of a dataset of wi-fi channel state information from esp32 microcontrollers recorded during performance of different activities.
- Creation of a system for activity detection from wi-fi channel state information using machine learning.

Remote Research Assistant at Qatar University Machine Learning Group **August 2022 – May 2023**
Supervised by: Muhammad E. H. Chowdhury *Qatar University*

- Reconstruction of fetal ECG from abdominal mother ECG using 1D CycleGAN.
- Adventitious lung sound detection using deep learning.

Publications

Article(s) in Journals

- Promit Basak*, **A.H.M Nazmus Sakib***, Muhammad E. H. Chowdhury, Nasser Al-Emadi, Huseyin Cagatay Yalcin, Shona Pedersen, Sakib Mahmud, Serkan Kiranyaz, Somaya Al-Maadeed **A Novel Deep Learning Technique for Morphology Preserved Fetal ECG Extraction from Mother ECG using 1D-CycleGAN.** Expert Systems With Applications (*Equal contribution)

Article(s) in Conference Proceedings

- Promit Basak,Shahamat Mustavi Tasin,**A.H.M Nazmus Sakib**, Syed Doha Uddin, Md Atiqur Rahman Ahad (2021). **Windowless Approach to Recognize Various Modes of Locomotion and Transportation.**UbiComp '21. Link
- Promit Basak, Shahamat Mustavi Tasin, Malisha Islam Tapotee, Md. Mamun Sheikh, **A. H. M Nazmus Sakib**, Sriman Bidhan Baray, and M. A. R. Ahad. 2020. **Complex nurse care activity recognition using statistical features.** UbiComp-ISWC '20. link

Book Chapter(s)

- **A.H.M Nazmus Sakib**, Promit Basak, Syed Doha Uddin, Shahamat Mustavi Tasin, Md Atiqur Rahman Ahad(2021).**Can Ensemble of Classifiers Provide Better Recognition Results in Packaging Activity?** in Sensor and Video-Based Activity and Behavior Computing.Page-167-180. Link

Selected Projects

DDoS Attack Detection using Machine Learning — July 2020

HCLTech hack IITK

- Mined captured wireshark data packets for meaningful tokens.
- Detected DDoS attacks usimg machine learning tecniques.

Satellite Image Segmentation — November 2020

Data Analytics Challenge,KDAG

- Image processing, Augmentation and Imbalanced data handling.
- Extracted ”vegetation” class using semantic segmentation.

Soccerbot — March 2019

Technovision, NSU

- Built a bluetooth controlled robot with arduino.
- Created a simple android app for controlling the robot.

Honors and Awards

- 2nd Nurse Care Activity Recognition Challenge, **1st Runner Up**
- HCLTech hack IITK 2020, **1st Runner Up**
- Bento Packaging Activity Regnition Challenge 2021, **Champion**
- Mujib Idea Contest 2021, Selected among the top **30** ideas

Technical Skills

Languages: Python (numpy, pandas, scikit-learn, tensorflow), Javascript (ReactJS, NextJS), C, HTML, SQL
Tools: VS Code, GIT, MATLAB, AutoCAD, Cisco Packet Tracer, Latex, Pspice

Volunteering Activities

IEEE Student Branch DU — **February 2019-January 2020**
Webmaster — *University of Dhaka*

IEEE RAS DU — **February 2020-January 2021**
Program Coordinator — *University of Dhaka*

References

Available upon request