

Azizul Zahid

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RESEARCH INTERESTS

Machine Learning | Deep Learning | Computer Vision | Artificial Intelligence | Audio Processing

ECADEMIC CREDENTIAL

Bangladesh University of Engineering and Technology (BUET)

B.Sc. in Electrical and Electronic Engineering

CGPA: **3.63** out of **4.00**

Dhaka, Bangladesh

Feb 2017– May 2022

RESEARCH EXPERIENCES

Cyber Physical Intelligence (CPI) Laboratory

Institute of Appropriate Technology (IAT), BUET

*Research Assistant - Under the supervision of **Dr. Tahsina Farah Sanam***

Dhaka, Bangladesh

Sep 2022 - Present

- **CSI-Based Dataset Development and Applications Using Machine Learning Based Classification Approach.**

GPS systems, as we all know, are often used for positioning in the outdoors. However, devising realistic methods for indoor localization is difficult due to the low performance of GPS-based approaches for indoors. On the other hand, indoor localization based on wireless local area networks (WLAN) is becoming more common because of the open access and lower cost of various wireless signals. Our goal is to create an environment-specific CSI dataset and, using this dataset, we will perform heart rate detection, waste management, and HAR analysis. Then we'll search for an environment-invariant CSI model.

Undergraduate Research

- **Bangla Voice Recognition Based Interaction Tool at Public Places for Visually Impaired People.**

Supervisor: **Dr. Celia Shahmaz**

The main objectives of this research are to build a Bangla voice dataset and a voice-based user interface for visually impaired individuals that can be used in any public place like restaurants, libraries, etc. It should be noted that this kind of user interface software is available for English-speaking people, but not much work has been done on using it for Bangla-speaking people. The primary interests of the research are the collection and processing of Bangla speech data for training the CNN model.

PUBLICATIONS

- Mir Sayeed Muhammad, **Azizul Zahid**, Md. Asif Iqbal, “*BanglaNum - A Public Dataset for Bengali Digit Recognition from Speech*”, **submitted to** “*12th International Conference on Electrical and Computer Engineering (ICECE) – 2022*”.
- **Azizul Zahid**, Dr. Abdul Hasib Chowdhury, Asadullah Sarkar, “*Reliability Analysis of Multi-Area Power Systems*”, **submitted to** “*12th International Conference on Electrical and Computer Engineering (ICECE) – 2022*”.

TECHNICAL SKILLS & EXPERTISE

Simulation & Design Tools: PSpice, Simulink, AutoCAD, PSSE

Programming Language: Python, MATLAB, C/C++

Data mining: Numpy, Pandas

Data visualization: Matplotlib, Seaborn

Machine Learning: Scikit-Learn

Others: Git, Microsoft Office, Latex

RELEVANT COURSEWORKS

Probability and Statistics | Linear Algebra | Calculus | Computer Programming theory & Lab | Numerical Laboratory | Digital Signal Processing | Microprocessors and Embedded System | Control System | Communication I & II | Digital Electronics | Solid State Devices | Electronics I & II

ONLINE CERTIFICATIONS

- **Machine Learning** by Stanford University on Coursera.
- **Neural Networks and Deep Learning** by DeepLearning.AI on Coursera.

SIGNIFICANT PROJECTS

- Content-Based Movie Recommender System.
- Heart Disease Prediction.
- Digital Image Processing using Matlab GUI.
- Obstacle Avoiding and Fire Extinguishing Robot with PID Optimized Controller.
- Real-Time Object Detection Using Radar Image Methodology.
- Data Transmission using Li-Fi Technology.
- Sectionize Effects of Linear Induction Motor.

AWARDS AND HONORS

- Dean's listed (Outstanding performance in two consecutive semesters), 2021-2022.
- Regional participant, "Bikiron – A sustainable Energy innovation Challenge - 2021".
- District Winner, "National Math Olympiad – 2016".
- National Finalist and Divisional Champion, "National Creative Talent Hunt Competition - 2015".

EXTRA CURRICULAR ACTIVITIES

- **Member**, BUET Robotics Club.
- **District Ambassador**, Ankur International.
- **Teacher**, OMECA Admission Coaching Center.
- **Finalist**, Hall Badminton Championship.

REFERENCES

Dr. Abdul Hasib Chowdhury
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EEE, BUET.
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Dr. Tahsina Alam Sanam
Assistant Professor
IAT, BUET.
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