

# Faisal Farhan

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Ahsanullah University of Science and Technology, Dhaka-1214, Bangladesh.

## EDUCATION

### M.Sc in Medical Imaging and Applications

Europe

Erasmus Mundus Joint Master's Degree

September 2023 - September 2025

Université de Bourgogne, France; University of Cassino, Italy; University of Girona, Spain;

### B.Sc. in Electrical and Electronic Engineering

Dhaka, Bangladesh

Ahsanullah University of Science & Technology

April 2016 - January 2021

GPA: 3.936/4.0; Rank: 1/196

**Undergraduate Thesis:** Study of Pattern Recognition System through the development of a Raspberry Pi based speaker recognizer.

## RESEARCH INTERESTS

Signal Processing, Medical Imaging, Image Processing, Machine Learning & Applied Artificial Intelligence

## PROFESSIONAL EXPERIENCES

### Lecturer

June 2021 - Present

Department of Electrical and Electronic Engineering, Ahsanullah University of Science & Technology

- Prepared and delivered lectures, tutorials, workshops and seminars.
- Developed different curriculum and course materials.
- Conducted research and writing papers, proposals, journal articles.
- Attended and participated in meetings, conferences, and other events in and outside institution.
- Supervised undergraduate students.

### Faculty Member

May 2021 - July 2021

School of Science, Engineering & Technology, East Delta University

- Prepared and delivered lectures, tutorials, workshops and seminars.
- Attended and participated in meetings, conferences, and other events in and outside institution.
- Supervised undergraduate students.

## PUBLICATIONS

1. Kabir, M. S. A., **Farhan, F.**, Siddiquee, A. A., Baroi, O. L., & Rahimi, J. (2023). Effect of Input Channel Reduction on EEG Seizure Detection. *Przeglad Elektrotechniczny*, 2023(12). [\[Paper Link\]](#)
2. Thahmidul I. Nafi, Erfanul Haque, **Faisal Farhan**, Asif Rahman "High Accuracy Swin Transformers for Image-based Wafer Map Defect Detection", *International Journal of Engineering and Manufacturing*, 2022 [\[Paper Link\]](#)
3. **F. Farhan** and T. I. Nafi, "ANN based approach to predict criminal trends in Bangladesh", 2nd International Conference on Artificial Intelligence and Signal Processing (AISP), 2022. [\[Paper Link\]](#)
4. T. H. Rafi, R. M. Shubair, **F. Farhan**, M. Z. Hoque and F. M. Quayyum, "Recent Advances in Computer-Aided Medical Diagnosis Using Machine Learning Algorithms with Optimization Techniques", in *IEEE Access*. [\[Paper Link\]](#)
5. T. H. Rafi, **F. Farhan** (2021), "A Performance Evaluation of Machine Learning Models on Human Activity Identification (HAI)", 12th International Conference on Soft Computing and Pattern Recognition, Springer. [\[Paper Link\]](#)
6. T. H. Rafi, **F. Farhan**, Z. Hoque, F. Quayyum. (2020). "Electroencephalogram (EEG) brainwave signal-based emotion recognition using extreme gradient boosting algorithm", *Annals of Engineering*, 1(1), 0005. [\[Paper Link\]](#)
7. "Revival of the Lost Glory of Muslin through Identification of Phuti Karpas Plant with an Effective Approach by Using Convolution Neural Network", *Smart Agricultural Technology*. [Under Review]

## TECHNICAL SKILLS

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- Programming Languages: C++, Python, Matlab, Verilog, HTML & CSS, LATEX.
- Libraries: Pandas, NumPy, Matplotlib, Tkinter.
- Tools: Google Colab, Git, Visual Studio, Codeblocks, MATLAB, Arduino.
- Simulators: Orcad Pspice, Quartus, Proteus, Cadence.
- Design Software: Adobe Photoshop, Adobe Illustrator, Figma
- OS: Windows, Linux, Raspbian.

## ACADEMIC HONORS

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- Erasmus+ Joint Masters Degree (2023)
- Dean's List of Honor in all four academic years.
- Khan Bahadur Ahsanullah award (highest CGPA among all department in the graduating class, to be conferred in Convocation'13)
- Nominee for Prime minister gold medal award (Academic year 2021)

## TEACHING EXPERIENCES

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|---|------|
| <b>EEE 2285 Analog and Digital Electronics</b>                                | 2022 |
| Course Instructor, Ahsanullah University of Science & Technology, Bangladesh. |      |
| <b>EEE 1287 Basic Electrical Engineering</b>                                  | 2021 |
| Course Instructor, Ahsanullah University of Science & Technology, Bangladesh. |      |
| <b>EEE 213 Electronic Devices and Circuit</b>                                 | 2021 |
| Course Instructor, East Delta University, Bangladesh.                         |      |
| <b>EEE 313 Microprocessor and Interfacing</b>                                 | 2021 |
| Course Instructor, East Delta University, Bangladesh.                         |      |

## CONFERENCE PRESENTATIONS

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- ◆ 2nd IEEE International Conference on Artificial Intelligence and Signal Processing (AISP). 2022
- ◆ 12th International Conference on Soft Computing and Pattern Recognition (SOCPAR'20). 2020

## LEADERSHIP EXPERIENCES

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- **Treasurer**, AUST Career Development Club 2022-2023
- **Chittagong Division Representative**, Bangladesh Development Project 2021
- **Vice President**, Ahsanullah University of Science & Technology EEE Society 2020
- **Lead Volunteer**, Youth's Voice Bangladesh 2013-2015

## PROFESSIONAL AFFILIATIONS

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- ◆ Institute of Electrical and Electronics Engineers(IEEE)
- ◆ IEEE WIE Bangladesh Section
- ◆ AUST Innovation & Design Club

## SYNERGISTIC ACTIVITIES

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- Participated in Google Hashcode 2021 programming competition. 2021
- Participant in STUDENT PROFESSIONAL AWARENESS CONFERENCE, North South University SPAC. 2018
- Participant in North South University Power Buzz programming competition 2018
- Participant in North South University Electrathon technology competition 2018
- Participant in AUST Techfiesta technology competition 2017
- Interhouse Basketball competition champion at High School 2015
- Interhouse Volleyball competition champion at High School 2014,2015