DR. FARIAH MAHZABEEN [FMA]

Assistant Professor

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Biography

Dr. Fariah Mahzabeen is currently an assistant professor of ECE at North South University, Bangladesh.Before NSU, she was a tenure-track assistant professor at San Jose State University in USA. She also brings in industry experience from companies like Google, Verily and Meta at Silicon Valley.

Research Areas

- Artificial Intelligence & Robotics
- Embedded Systems and Internet of Things (IoT)
- Human Computer Interaction (HCI)
- Mobile, Wireless and Web Applications Development
- Semiconductor Device and Technology

Research Interests

With the broader research mission to provide: “Personalized, Inclusive and Impactful Innovations to Improve Human Lives”, Dr. Mahzabeen has always been interested in interdisciplinary research ideas that combine hardware and software across multiple areas of STEM like: multidisciplinary areas like: Biosensors, Wearables, IoT, AI, ML, HCI – to build meaningful solutions to improve human experiences in health, education and the environment. Her current research projects are designed to engage students to solve challenging and meaningful problems.

She has established a research group, Mahzabeen Lab in 2024 at NSU, and welcomes passionate students and collaborators from diverse disciplines.

Teaching

- EEE241/ETE241 Electrical Circuits II
- EEE241L/ETE241L Electrical Circuits II Lab
- EEE 299 Junior Design Project I
- CSE499A/EEE499A/ETE499A – Senior Design I
- CSE499B/EEE499B/ETE499B – Senior Design II
- EEE 321 Introduction to Communications Systems

Research Projects & Grants

Ongoing Research Projects:

1. Assessing the usability of existing smartwatches among the older population in low-to middle-income-countries (LMICs) like Bangladesh.
2. Developing a biosensor for on-field detection of Typhoid Bacteria
3. Skin Disease Detection with Deep Learning (accepted in IEEE TENCON 2024)
4. Classification Precision in Endodontic Imaging using Advanced Deep Learning with Adaptive Squeeze-and-Excitation in Enhanced VGG-19 and Feature Pyramid Network (accepted in IEEE TENCON 2024)
5. A Machine Learning and Explainable AI-Based Risk Assessment for Heat-Related Illness
6. Prediction of Mental Health Risk Levels in University Students Using Machine Learning Techniques
7. Developing A Multimodal Fall Detection Sensor for Elderly Care
8. Cardiac Risk Monitoring at Home Through Multiple Sensors and ML

Current Grants: NSU CTRGC, 2023-2024 and Seed Grant (NSU-CHRF MoU)

Professional Activity

- Faculty Advisor: IEEE NSU Student Branch, Women in Engineering Affinity Group
- Reviewer: IEEE TENCON, 2024
- Reviewer: IEEE ICICT Conference, 2024, 2023
- Reviewer – NASA MITTIC Proposals, 2022, 2023
- Next-Gen Biotech Session Co-Chair, Silicon Valley Women in Engineering Conferences – 2021, 2022