

## FAHIM HAFIZ

Lecturer, Department of CSE, United International University, Dhaka, Bangladesh  
Email: fahimhafiz@cse.uui.ac.bd

Personal Website LinkedIn Google Scholar GitHub

## RESEARCH INTERESTS

---

Machine Learning, , IoT, Health Informatics, Computer vision and HCI.

## EDUCATION

---

**United International University, Dhaka, Bangladesh** June 2023 — Present  
Master of Science (M.Sc) in Computer Science Engineering

**Bangladesh University Of Engineering and Technology, Dhaka, Bangladesh** February 2016 — January 2021  
Bachelor of Science (B.Sc) in Electrical and Electronic Engineering CGPA: 3.87(13th in the Department)

## RESEARCH and ACADEMIC EXPERIENCE

---

**North South University** Dhaka, Bangladesh  
Research Assistant 2022 — Present

**United International University** Dhaka, Bangladesh  
Lecturer, Department of CSE February 2022 — Present

**Military Institute of Science and Technology** Dhaka, Bangladesh  
Lecturer, Department of EECE March 2021 — February 2022

## PROJECTS EXPERIENCE

---

**Designing Microprocessor Lab and Network Lab Project Manual using Raspberry Pi (ongoing)** 2024-present  
We are working on building a repository that any student can follow to implement complex engineering problems utilizing Microcontrollers, and sensors as well as build IoT-based Systems. You can see the detailed implementation strategy once our paper regarding this project is published online which is under review now.

**Image processing in SEM Images (ongoing)** 2024-present

**Unsupervised Clustering in single-cell RNA-seq data** 2023  
In this work, I tried to apply different clustering algorithms in scRNA-seq data for enhanced clustering accuracy for such unstructured data.

**Face Recognition based security system using Deep Neural Networks** 2019  
We completed this project during our undergraduate studies, deploying TensorFlow to create a deep neural network for a real-time, face recognition-based security system.

**Hand Gesture Controlled Robotic Arm Using EMG Sensor** 2018  
Undergraduate Level, BUET

**‘Catch The balls’- A game for interactive logical gaming system using proteus** 2018  
Undergraduate Level, BUET

## PUBLICATIONS

---

### Conference paper

[Accepted in Tiny Tracks, ICLR-24] Sayeedi, M.F.A., Hafiz, F. and Rahman, M.A., 2024. MosquitoFusion: A Multiclass Dataset for Real-Time Detection of Mosquitoes, Swarms, and Breeding Sites Using Deep Learning. arXiv preprint arXiv:2404.01501.

### Journal paper

[Under review in Wiley’s Computer Applications in Engineering Education] Designing a Microprocessors and Microcontrollers Laboratory Course Addressing Complex Engineering Problems and Activities

### Conference paper

[Under review in ICLR-25] Enhancing Typing Speed and Ergonomics Through Optimal Keyboard Design: A Reinforcement Learning Approach

## AWARDS and CERTIFICATES

---

### AI in Public Health Workshop

Workshop on time series forecasting using Deep Learning Methods.

Child Health Research Foundation, Bangladesh  
2024

### Organiser Appreciation Award

Awards for organising the CSE Project Show each trimester

Dept. of CSE, UIU  
2024

### Dean's List Award

Given to students who achieve CGPA above 3.75

Undergraduate Level, Dept. of EEE, BUET  
2017-2021

### Winner, Inter University MATLAB Competition

2nd in MATLAB Contest in BUET

EEE DAY Competition '19, BUET  
2019

## OTHER EXPERIENCES

---

### Currently overseeing the responsibilities of UIU Robotics Club

Moderator

UIU Robotics Club, UIU  
January, 2024 — Present

### Organizing 'CSE Project Show' in each trimester at UIU

Main Organiser

UIU  
2023 — Present

### Working in a voluntary blood donor organization'BADHAN'

Vice President, Kazi Nazrul Islam Hall BADHAN Zone

BUET  
2019 — 2020

## SKILLS

---

- **Programming:** MATLAB, PYTHON (Numpy, Pandas, Pytorch), C, R
- **Software:** Proteus, LTSpice, Arduino, Origin, VS-Code
- **Hardwares(Microcontrollers):** Arduino, ESP32, Raspberry Pi