

Debobrata Chakraborty

 Debobrata Chakraborty  debobrata-chakraborty  dckakon.github.io
 (+880) 173-151-2180  debobratachakraborty80@gmail.com

EDUCATION

M.Sc. in Software Engineering Jan 2023 – Aug 2024
University of Dhaka
CGPA: 3.67/4.00

B.Sc. in Computer Engineering Jan 2018 – Jan 2022
American International University-Bangladesh (AIUB)
CGPA: 3.74/4.00

PROFESSIONAL EXPERIENCES

Lecturer Jul 2025 – Present
City University
Deliver undergraduate lectures, lab sessions, supervise student projects, and provide academic advising. Implement Outcome-Based Education (OBE) by designing CO–PO aligned assessments and rubrics, evaluating outcome attainment.
Courses taught:
[Spring 2026] - Advanced Enterprise Java; Computer Architecture
[Fall 2025] - Algorithms; Object-Oriented Programming; Computer Architecture; Compiler Design

Embedded System Engineer Feb 2022 – Nov 2022
STATA IT Limited
Developed and tested a Flutter-based mobile application for IoT devices, enabling seamless device–app data communication.

Machine Learning Engineer (Intern) Sep 2021 – Dec 2021
Pioneer Alpha
Implemented Bangla image captioning and image similarity solutions.

RESEARCH EXPERIENCE

Research Assistant Jan 2025 – Dec 2025
3D Vision & Remote Sensing Lab,
Institute of Information Technology, University of Dhaka
Project Title: PH-Shape Descriptor-Based Building Roof Extraction from Airborne LiDAR Point Clouds
Funding Agency: University Grants Commission (UGC), Bangladesh
Supervisor: Dr. Emon Kumar Dey

PUBLICATIONS

- [Journal] 2026
1. **Urban LiDAR Point Cloud Segmentation Using Multi-Level Stacked Learning With Counterfactual Guided Minority Class Enhancement**
Debobrata Chakraborty, Ahmed Adnan, and Emon Kumar Dey
IEEE Transactions on Geoscience and Remote Sensing [Under Review]
2. **Segmentation of LiDAR Point Cloud Data in Urban Areas using Adaptive Neighborhood** 2024
Debobrata Chakraborty, and Emon Kumar Dey
PLOS One, Volume: 19, Issue: 7, Pages: e0307138. DOI:10.1371/journal.pone.0307138
- [Conferences]
1. **Action Recognition Based Real-time Bangla Sign Language Detection and Sentence Formation** 2023
Shartaz Khan Akash, Debobrata Chakraborty, Mehedi Mahmud Kaushik, Barsan Saha Babu, Md. Saniat Rahman Zishan
3rd International Conference on Robotics, Electrical and Signal Processing Techniques (ICREST). DOI:10.1109/ICREST57604.2023.10070072
2. **Deep Learning-Based Prediction of Football Player Performance During Penalty Shootout** 2023
Debobrata Chakraborty, Mehedi Mahmud Kaushik, Shartaz Khan Akash, Md. Saniat Rahman Zishan, Md. S. Mahmud
26th International Conference on Computer and Information Technology (ICCIT). DOI:10.1109/ICCIT60459.2023.10441247

GRANTS

Master's Fellowship

2024

ICT Division, Ministry of Posts, Telecommunications and Information Technology, Bangladesh

AWARDS

Vice-Chancellor Award

Mar 2023

Awarded the Vice-Chancellor's Award at the 21st Convocation of AIUB for the capstone project.

Dean's Award for Best Capstone Project

Jan 2022

Received the Dean's Award from the Faculty of Engineering at AIUB during the academic year 2021-22 for the outstanding capstone project.

Dean's Award

Jan 2019

Received the Dean's Award from the Faculty of Engineering at AIUB in Fall 2018-19 for maintaining excellent academic results.

ACADEMIC SERVICE

Journal Reviewer

May 2025

PLOS One

PROJECTS

Files Pathao: Encrypted File Sharing Tool

2023

A file sharing system developed in Node.js that uses AES encryption to ensure reliable file transfers over network sockets.

Supervisor: Dr. B M Mainul Hossain

[*Project Repository*]: github.com/dckakon/Encrypted-File-Sharing-Tool/

Boi Bichitra: A Bookshop Management System

2021

A Windows application developed in C# for efficient management of bookshop inventory, sales, and customer records.

Supervisor: Md. Hasibul Hasan

[*Project Repository*]: github.com/dckakon/Bookshop-Management-system

RoverAIUB: Six-Wheeled Rover

2020

RoverAIUB is a six-wheeled rover designed for both manual and autonomous operation, featuring computer vision for object detection and LiDAR-based autonomous navigation.

Supervisor: Dr. Chowdhury Akram Hossain

[*System Acceptance Review*]: youtu.be/sX_j-rXieeE

EXTRA CURRICULAR ACTIVITIES

Vice Chairperson

Aug 2021 – Sep 2022

AIUB Community of Engineering Students (ACES)

Collaborated with team members and volunteers to plan and organize engineering webinars, seminars, and workshops.

Team Lead, Marketing and Promotion

Oct 2020 – Dec 2020

Hult Prize at American International University-Bangladesh

Collaborated with marketing and video editing teams to advertise webinars and produce promotional content.

Software Team Lead

Sep 2019 – Mar 2020

AIUB Robotic Crew

Designed printed circuit board of the rover to improve system performance and reliability, developed both autonomous navigation and manual driving systems, and served as the primary operator.

Technical Skills: Robot Operating System, Embedded System Programming, Proteus

SKILLS

Programming Languages

Java, Python, Dart, Matlab, C, C++

Web Development

Flask, FastAPI, Javascript, Django

Machine Learning Tools & Libraries

Tensorflow, Keras, Open3D, OpenCV, YOLO, Scikit-Learn, Numpy, Weka

Miscellaneous

Cloudcompare, Git, LaTeX, MySQL, Firebase, Alloy Analyzer

REFERENCES

Dr. Emon Kumar Dey, Associate Professor, Institute of Information Technology, University of Dhaka

E-mail: emonkd@iit.du.ac.bd

Dr. Md. Saniat Rahman Zishan, Professor, Faculty of Engineering, American International University-Bangladesh

E-mail: saniat@aiub.edu