

SEFATUL WASI

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EDUCATION

INDEPENDENT UNIVERSITY, BANGLADESH.

DHAKA, BANGLADESH

Bachelor of Science in Computer Science

January 2018-November 2023

Major: Computer Science / Minor: Management Information Systems (MIS)

- **CGPA:** 3.44/4.00 (Average GPA: 3.76 / 4.00 in Final Year including Thesis)
- **Thesis:** “Kidney Tumor Recognition from Abdominal CT Images using Transfer Learning and Deep Convolutional Neural Networks.”; Supervisor: Dr. Saadia Binte Alam
- **Official Coursework finished:** Summer '22, **Convocation:** November 2023.

RESEARCH INTERESTS

Medical Image Processing, Computer-aided Detection (CADe), Computer-aided Diagnosis (CADx), Deep Learning, Biomedical Engineering, and Renewable Energy.

PROFESSIONAL EXPERIENCE

DEPARTMENT OF CSE, INDEPENDENT UNIVERSITY, BANGLADESH.

DHAKA, BANGLADESH

Research & Development Officer

October 2024-Present

- **Intelligent Computing and Systems Research Group (ICSRG):**
 - Continuing previous research work and contributing to new projects as per requirement with AMERI.
 - Co-supervise students, manage computational resources and documentations.
 - Securing national/international research grants and collaborations.
- **Departmental Activities:**
 - Building a feasible pipeline of senior project/thesis and yearly projects for the CSE/CS curriculum.
 - Assist faculty members with research activities, exam invigilation and tutorials.
 - Assist in the accreditation process through preparing Reports for the department, contributing to the university's academic recognition.

DEPARTMENT OF CSE, INDEPENDENT UNIVERSITY, BANGLADESH.

DHAKA, BANGLADESH

Research Assistant

June 2023-September 2024

- Working on automatic ROI localization solutions using deep learning techniques from radiologic images.
- Analyze and process biomedical dataset for deep learning models.
- Projects in collaboration with Advanced Medical Engineering Research Institute (AMERI), University of Hyogo.

DEPARTMENT OF PHYSICAL SCIENCES, INDEPENDENT UNIVERSITY, BANGLADESH.

Teaching Assistant

2019-2022

- Assist the professors in experiments and tutorials (PHY101, PHY102).
- Organize national competitions like Math and Physics Olympiad.

PUBLICATIONS

1. KIDNEY TUMOR RECOGNITION FROM ABDOMINAL CT IMAGES USING TRANSFER LEARNING

2023

Sefatul Wasi, Saadia Binte Alam, Rashedur Rahman, M Aashraful Amin, Syoji Kobashi

2023 IEEE 53rd International Symposium on Multiple-Valued Logic (ISMVL)

Link: IEEE Xplore

2. INVESTIGATION OF A COW URINE-BASED POWER GENERATION TECHNOLOGY MODEL FOR A COST-EFFECTIVE AND SUSTAINABLE ENERGY SOURCE

2023

MW Hasan, K Huynh, TH Soha, JAM Rubayet, S Wasi

International Journal of Innovation and Applied Studies

Link: ResearchGate

- 3. KIDNEY ABNORMALITY DETECTION USING SEGMENTATION-GUIDED CLASSIFICATION ON COMPUTED TOMOGRAPHY IMAGES** **2024**
Joyita Faruk, Saadia Binte Alam, SK Sadia Tasnim Elma, Sefatul Wasi, Rashedur Rahman, Syoji Kobashi
 2024 International Conference on Machine Learning and Cybernetics (ICMLC)
[IEEE Xplore Proceedings Pending]
- 4. AUTOMATIC KIDNEY ABNORMALITY LOCALIZATION USING ABDOMINAL CT IMAGES** **2024**
 Journal Article **[Submission Pending]**
- 5. A DEEP LEARNING APPROACH FOR CYST AND TUMOR-CYST CLASSIFICATION USING VGG-16 ARCHITECTURE ON ABDOMINAL CT IMAGES** **2024**
 Journal Article **[In progress]**
- 6. AUTOMATED SEMANTIC SEGMENTATION OF PELVIC BONES AND FRACTURE DIAGNOSIS FROM RADIOGRAPHIC IMAGES**
 Journal Article **[In progress]**

TECHNICAL SKILLS

- **AI/ML Libraries:** Tensorflow, Pytorch, OpenCV, Keras, Nibabel.
- **Programming:** C/C++, Python, Dart, MySQL.
- **Software and Web Development:** HTML, CSS, Bootstrap, Flutter, WordPress.
- **Analytical Tools, Office Software & Operating Systems:** Microsoft 365 apps, Google Workspace, Data Viz (Tableau, Power BI), MITK (Medical Imaging Software Tool), MIPAV, Linux.

GRANTS

- 1. PELVIC FRACTURE AND BONE SEGMENTATION FROM RADIOGRAPHIC IMAGES** **2022-2024**
 IUB Sponsored Research Project
PI: Dr. Saadia Binte Alam
Fund: ~ \$6.3K
- 2. DETECTION OF PNEUMONIA FROM CHEST X-RAY (CXR) USING DEEP LEARNING METHOD** **2024-2025**
 IUB Sponsored Research Project
PI: Dr. Saadia Binte Alam
Fund: ~ \$2.3K

AWARDS & ACHIEVEMENTS

- Dean's list 2018
- Runners-up at Intra IUB Techfest Hackathon Summer 2019
- Runners-up at Intra IUB Techfest Hackathon Autumn 2019

RECOMMENDATIONS

SUPERVISOR

DR. SAADIA BINTE ALAM

Email: saadiabinte@iub.edu.bd

Head & Associate Professor,
 Department of Computer Science Engineering,
 Independent University, Bangladesh. (IUB)

MENTOR

MD WAHIDUL HASAN

Email: Hasan.m.wahidulsets@iub.edu.bd

Lecturer,
 Department of Computer Science Engineering,
 Independent University, Bangladesh. (IUB)
 PhD Candidate and Fellow NASA JPL,
 South Dakota School of Mines and Technology, USA

CO-SUPERVISOR

DR. RASHEDUR RAHMAN

Email: rashed.riyadh14sets@iub.edu.bd

Assistant Professor (Adjunct),
 Department of Computer Science Engineering,
 Independent University, Bangladesh. (IUB)

IEEE COMPUTER SOCIETY SBC FACULTY ADVISOR

DR. MAHADY HASAN

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Associate Professor,
 Department of Computer Science Engineering,
 Independent University, Bangladesh. (IUB)