

Suraia Afroz Maria

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RESEARCH INTEREST

Computer Vision, Deep Learning, Robotics, Bioinformatics, Human-AI Interaction

EDUCATION

2020 - 2024 Bachelor of Science in Computer Science and Engineering at **United International University**
GPA: 3.6/4.0
Major: Data Science
Thesis: Development of an Underwater Vehicle for Survey, Search and Rescue
Notable Courses: Machine Learning, Digital Image Processing, Data Mining, Bioinformatics, Software Architecture

WORK EXPERIENCE

Private Tutor	Jan 2025 - Present
Instructor at Creative Junior, Creative IT Institute	Jul 2025 - Sep 2025
Undergraduate Researcher at CAIR Lab, United International University	Jul 2022 - Oct 2024
Grader at United International University	Feb 2023 - Mar 2024

PUBLICATIONS

Suraia Afroz Maria, Md. Golam Mahmud, Ahmed Junaed Tanim, Md. Yasin, Md. Abid Hossain, and Salekul Islam (2025). "Development of Underwater Vehicle for Survey, Search and Rescue". In: *2025 International Conference on Electrical, Computer and Communication Engineering (ECCE)*. IEEE Xplore. DOI: [10.1109/ECCE64574.2025.11013853](https://doi.org/10.1109/ECCE64574.2025.11013853).

PROJECTS

Explainable AI for Crop Disease [Github Link](#)

Demonstrates how Grad-CAM explanations can validate model predictions and build trust in automated crop diagnostics.

UIU Mars Rover Science [Video](#)

Designed Life Detection Framework, Biomolecule-based life detection, Rover-installed laboratory, Soil and rock data Analysis, Research on Raman Spectroscopy to identify molecules.

Remotely Operated Submarine [Paper Link](#)

This project is a part of my undergraduate thesis. The Remotely Operated Underwater Vehicle (ROUV) is designed with a unique 3D design providing six degrees of freedom which also includes a unique hardware implementation, image denoising, and object detection. This is specifically designed for exploration, search, and rescue missions under the water, maintaining fluid dynamics.

Student Room: An e-learning platform [Documentation](#)

This project is an outcome of my System Analysis and Design Laboratory. Student Room is a comprehensive student platform that offers a range of features to support student learning and academic success.

AWARDS & HONORS

25% to 100% scholarships for academic excellence of United International University.

Research Grant of 3 Lakh BDT - Research on underwater robotics for the first time at the United International University.

Second Runner-Up in CSE Project Show Fall 2023 (Course: System Design and Analysis) - Organized by United International University.

9th position - the University Rover Challenge 2023, 1st in the Asia - Organized by The Mars Society.

3rd position - the Anatolian Rover Challenge 2023, 1st in the Asia - Organized by UKET.

5th position - the University Rover Challenge 2024, 1st in the Asia - Organized by The Mars Society.

Successfully completed the **robotics workshop, Robo Apocalypse** - Organized by UIU Robotics Club, United International University.

Successfully completed the **Robotics and AI Workshop 2024**, a part of GREAT Talk - Organized by the British Council Bangladesh.

2nd Runner-Up - Brand Master 2.0, Organized by UIU Marketing Forum, United International University.

SERVICES

PR Secretary - UIU Robotics Club, United International University.

Assistant Office Secretary - Mirpur Cantonment Public Alumni Association

SKILLS

Programming Languages	C, C++, Python, Java
Scripting Languages	HTML, PHP, CSS, Javascript, SQL, Latex, BASH
Version Control	GitHub
Design Tools	Proteus, Logisim, CISCO Packet Tracer
Hardware	ESP32, Arduino
Machine Learning	Scikit-Learn, Matplotlib, Numpy, Pandas, Seaborn, OpenCV
Deep Learning	Keras, Tensorflow, Pytorch

REFERENCES

[Dr. Salekul Islam](#)

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North South University, Dhaka, Bangladesh
E-mail: salekul.islam@northsouth.edu

[Dr. A.K.M. Muzahidul Islam](#)

Professor of Computer Science and Engineering
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