

MD ASHRAFUL ISLAM

Electrical and Electronic Engineer

Lab Technician | Green University of Bangladesh (GUB) | Dhaka, Bangladesh

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🎓 Education

Jan 2019 - Dec 2022	B.Sc. in Electrical and Electronic Engineering (EEE) Green University of Bangladesh (GUB) <ul style="list-style-type: none">• CGPA: 3.14 out of 4.00 Focus: Power• Supervisor: M M Naushad Ali• Thesis: Prospect of Electric Boat in Dhaka: An Alternate Way of Transportation
Jun 2016 - Jul 2018	Higher Secondary School Certificate (HSC) Kushtia Government Technical School & College <ul style="list-style-type: none">• GPA: 5.00 out of 5.00 Focus: Electronic Control and Communication
Jan 2014 - May 2016	Secondary School Certificate (SSC) Kushtia Government Technical School & college <ul style="list-style-type: none">• GPA: 5.00 out of 5.00 Focus: General Electronics

🔍 Research Interest & Expertise

Renewable Energy Systems, Control Systems, Optimization, Hydrogen Fuel, Electric Vehicles

🏢 Research Experience

Founder & Lead Jan 2025- Present	CREDIT Lab (Center for Renewable Energy Development and Intelligent Technologies) - Established a virtual interdisciplinary lab dedicated to renewable energy and intelligent systems research. Leading collaborative projects, mentoring students, and fostering academia–industry partnerships to develop sustainable energy solutions and innovative applications.
Research Assistant Dec 2023 – Present	Project title: Investigation of Marine Ecosystems using Remote Operating Vehicles and Advanced Machine Learning Algorithms at the Coastal Area of the Bay of Bengal <ul style="list-style-type: none">• Principal Investigator: Professor Dr. ASM Shihavuddin• Funding Body: Center for Research, Innovation, and Transformation (CRiT), GUB• Amount: 0.5 million BDT• Responsibilities: Assisting in the development and deployment of Remote Operating Vehicles (ROVs) to monitor the Bay of Bengal's marine ecosystem, including data analysis and experimental design, and preparing project documentation.
Junior Researcher Dec 2023 – Present	Organization: Renewable Energy and Sustainability Lab (RESLAB) GUB <ul style="list-style-type: none">• Responsibilities: Engaged in ongoing research projects focused on renewable energy and sustainability. Contributing to data collection, analysis, and project coordination under the supervision of senior researchers.
Thesis Co-supervisor Jan 2024 - Present	Supervisor: M M Naushad Ali (Assistant Professor) Department of EEE GUB <ul style="list-style-type: none">• Responsibilities: Currently serving as a co-supervisor for undergraduate thesis students under the guidance of Mr. M. M Naushad Ali. Providing mentorship and guidance to students in conducting research, developing research knowledge, and writing thesis manuscripts.
Research Assistant Jan 2023 - Dec 2023	Supervisor: M M Naushad Ali (Assistant Professor) <ul style="list-style-type: none">• Responsibilities: Provided research support to M. M Naushad Ali, assisting in various aspects of research projects, including literature review, data organization, and experiment design.
Research Training	Course Name: Understanding Research Methods University of London Coursera <ul style="list-style-type: none">• Completion Date: 25th December 2021• Description: Completed an online course on research methods offered by the University of London via Coursera. Enhanced understanding of research methodologies, data analysis techniques, and ethical considerations in research.

👜 Professional Experience

Lab Technician Dec 2023 – Present	Department of EEE, Green University of Bangladesh <ul style="list-style-type: none">• Assisting faculty members and students in conducting experiments and practical sessions.• Updating lab experiments with rapid changes in knowledge and technology.• Responsible for maintaining laboratory equipment and ensuring its proper functioning.
Executive (Part-time) Feb 2022 - Mar 2022	Techbond IT Ltd. Northern University Building, 93 Kazi Nazrul Islam Ave, Dhaka-1215 <ul style="list-style-type: none">• Provided customer support services over the phone, addressing inquiries and resolving issues.• Handled calls professionally, adhering to company guidelines and standards.• Maintained accurate records of customer interactions and transactions using the CRM system.

• **Journal (Total - 7_Q1)**

2025 Islam, Md Ashraful, et al. " Optimization and Feasibility Analysis of Integrated Biogas–Solar Energy Systems for Rural Electrification. " *Results in Engineering*

2025 Islam, Zia Ul, et al. "Hybrid renewable energy systems towards sustainable development in Bangladesh: Configurations, optimizations, applications, challenges and future pathways." *Results in Engineering* 27 (2025): 105728.

2025 Islam, Md Ashraful, et al. "A comprehensive evaluation of photovoltaic simulation software: A decision-making approach using Analytic Hierarchy Process and performance analysis." *Energy Strategy Reviews* 58 (2025): 101663.

2024 Islam, Md Ashraful, et al. "Assessing the feasibility and quality performance of a renewable Energy-Based hybrid microgrid for electrification of remote communities." *Energy Conversion and Management: X* (2024): 100674.

2024 Islam, Md Ashraful, et al. "Integrating PV-based energy production utilizing the existing infrastructure of MRT-6 at Dhaka, Bangladesh." *Heliyon* 10.2 (2024).

2024 Islam, Md Ashraful, et al. "Optimizing energy solutions: A techno-economic analysis of solar-wind hybrid power generation in the coastal regions of Bangladesh." *Energy Conversion and Management: X* (2024): 100605.

• **Conference (Total – 33)**

2025 M. A. Islam et al., "Size Optimization and Performance Analysis of Hybrid Biogas-Solar System for Energy-Efficient Dairy Farming." *2025 4th International Conference on Robotics, Electrical and Signal Processing Techniques (ICREST)*. IEEE, 2025.

2024 M. A. Islam et al., "Hydro-Sun Harmony: An Innovative Hybrid Power Plant Model for Hill Tracts Energy Independence," *2024 6th International Conference on Electrical Engineering and Information & Communication Technology (ICEEICT-2024)*, Military Institute of Science and Technology (MIST), Dhaka-1216, Bangladesh.

2024 M. A. Islam et al., " Smart Cities, Sustainable Paths: Energy Harvesting and Mobility Solutions for Tomorrow's Urban Landscapes," *2024 2nd International Conference on Forthcoming Networks and Sustainability in the AIoT Era (FoNeSAIoT-2024)*, Ankara, Turkey

2023 M. A. Islam et al., "Techno-Economic Assessment of Electric Bus for Student Transportation Services: A Case Study," *2023 5th International Conference on Sustainable Technologies for Industry 5.0 (STI)*, Dhaka, Bangladesh, 2023, pp. 1-6, doi: 10.1109/STI59863.2023.10464424.

2023 M. A. Islam et al., "Optimal Location Selection for Electric Vehicle Charging Points: Advancing Sustainable Urban Mobility in Dhaka," *2023 10th IEEE International Conference on Power Systems (ICPS)*, Cox's Bazar, Bangladesh, 2023, pp. 1-6, doi: 10.1109/ICPS60393.2023.10428845.

2022 M. A. Islam, M. M. N. Ali, A. J. Nahian, M. H. Maruf, M. S. Hossain Lipu and A. Shihavuddin, "Prospect of Electric Boat in Dhaka: An Alternate Way of Transportation," *2022 4th International Conference on Sustainable Technologies for Industry 4.0 (STI)*, Dhaka, Bangladesh, 2022, pp. 1-6, doi: 10.1109/STI56238.2022.10103245.

 **Notable Conference Presentations**

QPAIN-2025	Attended the 2025 IEEE International Conference on Quantum Photonics, Artificial Intelligence, and Networking (QPAIN-2025), where I presented my research as a poster presentation, contributing to discussions on emerging technologies in Saidpur, Bangladesh.
STI-2024	Attended the 6th International Conference on Sustainable Technologies for Industry 5.0 (STI-2024), where my research titled "A Reduced Component Nine-Level Inverter with Quadruple Boosting Capability: Design and Simulation." Has been recognized with the Best Paper Award in Track 2.
FoNeSAIoT-2024	In February 2024 the 2nd International Conference on Forthcoming Networks and Sustainability in the AIoT Era (FoNeSAIoT-2024) was held in hybrid mode in Ankara, Turkey, I participated online to present my study findings.
ICPS-2023	I presented my research outcomes at the December 2023 10th IEEE International Conference on Power Systems (ICPS) held in Cox's Bazar, Bangladesh. The conference offered a valuable opportunity to exchange ideas and discuss the latest advancements in the field of power systems, and I actively participated in person.
STI-2023	I presented my study findings at the 2023 5th International Conference on Sustainable Technologies for Industry 5.0 (STI) in Dhaka, Bangladesh. The conference took place, and I attended in person, providing an excellent platform for sharing insights and networking with fellow researchers.
BICET-2023	At the 2023 9th Brunei International Conference on Engineering and Technology 2023 (BICET-2023) held in Brunei Darussalam in hybrid mode, I participated online to present my study findings.
STI-2022	The 4th International Conference on Sustainable Technologies for Industry 4.0 (STI) in Dhaka, Bangladesh, in December 2022, provided the platform for presenting my research findings. Participating in person at the conference facilitated fruitful discussions and knowledge sharing among researchers and industry experts.

 **Technical Skills**

- **PV System simulation and Optimization:** PVsyst | HOMER Pro | SAM | PV*SOL | RETScreen
- **Programming Languages:** MATLAB | SIMULINK | Python

- **Design software:** AutoCAD | SketchUp | Photoshop | Adobe Premier Pro
- **Document Preparation and Illustration:** MS Office | LaTeX

📖 Language Test Score

Exam	Overall	Listening	Reading	Writing	Speaking
IELTS	7	8.5	6.5	6	6

📚 Training & Certifications

Certification	Institute	Completion date	Platform
Learning How to Learn: Powerful mental tools to help you master tough subjects	Deep Teaching Solutions	May 2021	Coursera
Python Data Structures	University of Michigan	June 2020	
Programming for Everybody (Getting Started with Python)	University of Michigan	May 2020	
Electric Power Systems	The State University of New York	May 2020	

🏆 Awards and Achievements

Rising Researcher Award	Department of Electrical and Electronic Engineering, Green University of Bangladesh - 2024 Recognized for outstanding research contributions as the most junior researcher in the department.
Best Paper Award	Awarded in Track-2 at the 6 th International Conference on Sustainable Technologies for Industry 5.0 (STI-2024) for "A Reduced Component Nine-Level Inverter with Quadruple Boosting Capability: Design and Simulation".
IOP Trusted Reviewer	Recognized as a Trusted Reviewer by IOP Publishing for delivering high-quality and reliable peer reviews.

👥 Peer Review Activity

Aquaculture International (Springer Nature)	• Served as a peer reviewer for 1 research manuscript in September 2025
Environmental Monitoring and Assessment (Springer Nature)	• Served as a peer reviewer for 1 research manuscript in 2025
Energy Conversion and Management: X (Elsevier)	• Served as a peer reviewer for 2 research manuscripts between June 2024 and August 2024

🏠 Extracurricular & Leadership

Jan 2020 - Present	President & Founding Member, Green Blood Bank: Actively volunteering in diverse roles to organize blood donation initiatives and save lives. As a founding member, I have contributed to building and expanding this community while leading activities to strengthen its impact.
Dec 2023	Organizing Committee Member, 5th STI-2023 International Conference and STI Expo: Contributed to the planning, coordination, and smooth execution of the conference, including organizing the STI Expo to bridge researchers and industry practitioners for collaboration.
Dec 2022	Volunteer at International Conference 4th STI-2022: Provided logistical support and ensured the efficient operation of conference activities.
Jan 2022 – Dec 2022	Office Secretary at Green University Sports Club: Managed administrative tasks and organized sports events, fostering a vibrant sports culture within the university community.
Jan 2020 - Dec 2022	Player at Green University Cricket Team: Represented the university cricket team in inter-university tournaments, showcasing teamwork and sportsmanship.
2016	Under-16 National Cricket Player (Kushtia District Cricket Team): Demonstrated exceptional cricketing skills at the regional level, representing the district team in competitive matches.

🔍 Reference

Name	: Prof. Dr. ASM Shihavuddin	M. M. Naushad Ali	Prof. Dr. Ahmed Al Mansur
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Relation	: Research, Profession, Academic	Research, Profession, Academic	Research, Profession, Academic