




# MD ABU TALHA

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Address: 02/A, RUAP, Sector 18, Uttara, Dhaka-1230, Bangladesh

## EDUCATION

### Master of Science in Electrical and Electronics Engineering (EEE)

American International University-Bangladesh (AIUB) | CGPA: 3.81/4.00

April, 2025

- Thesis: *Metabeuristic-Based Multi-Objective Optimization for Distribution Network Reconfiguration with Renewable Energy and EVs Integration*. [\[Thesis Book Link\]](#) (Supervisor: Professor Dr. Mohammad Abdul Mannan)
- Awarded a **partial tuition (25%) scholarship** for academic achievement and professional experience.
- Awarded AIUB Research Grant, **Grant No. AIUB-FE-24-02-01**

### Bachelor of Science in Electrical and Electronics Engineering (EEE)

American International University-Bangladesh (AIUB) | CGPA: 3.43/4.00

Dec. 2021

- Project: *Design of a Smart Safety Device for Women Using IoT*. [\[Thesis Book Link\]](#) (Supervisor: Dr. Mehedi Hasan, Sr. Assistant Professor)

## TEACHING EXPERIENCE

### Teaching Assistant (TA)

American International University-Bangladesh (AIUB)

Dhaka 1230, Bangladesh

Aug 2025 – Present

- Assisted in teaching Advanced Power System Analysis, Optimization of Power System Operation, and Renewable Energy Integration through tutorials, problem-solving sessions, and simulation-based activities.
- Supported faculty members in course material preparation, assignment evaluation, and mentoring undergraduate students in academic and research activities.

## RESEARCH EXPERIENCE

### Research Assistant (RA)

American International University-Bangladesh (AIUB)

Dhaka 1229, Bangladesh

Jan 2024 – Jul 2025

- Supervised undergraduate projects, and supported simulation and hardware implementation,
- Contributed to the preparation of journal and conference papers.

## PROFESSIONAL EXPERIENCE

### Asst. Project Manager (APM)

M/S M. A. Enterprise (MAE)

Dhaka 1212, Bangladesh

Sept 2022 – Dec 2023

### Asst. Manager (Electrical)

Best CNC (A concern of Ax-vision Electro Ltd.)

Dhaka 1230, Bangladesh

Jan 2022 – Aug 2022

## RESEARCH PUBLICATIONS

### Journal Articles (Published)

1. **M. A. Talha** et al., "Adaptive distribution network reconfiguration with renewable energy and EV integration using reverse-multiverse learning archimedes algorithm," *Front. Energy Res.*, vol. 14, no. 1731439, 2026. <https://doi.org/10.3389/fenrg.2026.1731439>
2. **M. A. Talha** et al., "Multi-objective optimal placement of EVCS and DGs in distribution systems using Flower Pollination Algorithm under varying load scenarios," *AJSE*, vol. 24, no. 2, p. 115, 2026. <https://doi.org/10.53799/xgzifs40>
3. A.R. Sagor, **M.A. Talha**, S. Ahmad, T. Ahmed, M.R. Alam, M.R. Hazari, and G.M. Shafiqullah, "Pelican optimization algorithm-based Proportional-integral-Derivative controller for superior frequency regulation in interconnected multi-area power generating system," *Energies*, vol. 17, no. 13, p. 3308, 2024. <https://doi.org/10.3390/en17133308>
4. M. S. Uddin, **J. M. A. Talha**, S. Ahmad, and M. M. H. Monna, "Grover enhanced quantum repeater system with 8-qubit optimization," *Nano Commun. Netw.*, no. 100608, p. 100608, 2025. <https://doi.org/10.1016/j.nancom.2025.100608>

### Journal Articles (Under Review)

1. **M.A. Talha**, "Explainable Hybrid CNN-LSTM-GNN Framework for Imbalance-Aware Intrusion Detection in SCADA-Oriented Energy Infrastructure," *Sustainable energy, grids and networks*.
2. **M.A. Talha**, "Vulnerability-Aware Blocking Control for Cascading Failure Mitigation in Wind-Integrated Cyber-Physical Power Systems," *Journal of Industrial Information Integration*.

### Conference Papers (Published)

1. **M.A. Talha** et al., "IoT-based real-time monitoring and control system for distribution substation," in 10th IEEE International Conference on Power Systems (ICPS), 2023. [doi](#)
2. **M.A. Talha** et al., "Renewable integration and energy management in DC microgrid," in 6th International Conference on Electrical Engineering and Information & Communication Technology (ICEEICT), 2024. [doi](#)
3. **M.A. Talha** et al., "Real-Time Economic Dispatch by Bat Algorithms (BA) Optimization Technique," in International Conference on Innovations in Science, Engineering and Technology (ICISSET), 2024. [doi](#)
4. **M.A. Talha** et al., "Optimization of Distribution Network Reconfiguration Using Various Algorithms for Power Loss Minimization," in International Conference on Innovations in Science, Engineering and Technology (ICISSET), 2024. [doi](#)
5. **M.A. Talha** et al., "Performance Evaluation of Hybrid AC/DC Microgrids with Integrated Renewable Energy," in IEEE International Conference on Signal Processing, Information, Communication and Systems (SPICSCON), 2024. [doi](#)

6. **M.A. Talha** et al., "Optimal selection of battery types in microgrids using multiple optimization algorithms," in 2024 13th International Conference on Electrical and Computer Engineering (ICECE), 2024, pp. 45–50. [doi](#)
7. M.S. Khan Mithil, **M.A. Talha**, and S. Ahmad, "Real-Time Power Monitoring and Fault Detection Using FPGA and cRIO 9039," in International Conference on Innovations in Science, Engineering and Technology (ICISSET), 2024. [doi](#)
8. **M. A. Talha** et al., "Automated parking management with real-time image processing and OCR," in 2025 International Conference on Electrical, Computer and Communication Engineering (ECCE), 2025, pp. 1–6. [doi](#)
9. R.I. Chowdhury, and **M.A. Talha** et al, "Impact Analysis of Short Circuit Current Limit on Damping Phenomenon for Different PV Penetration Levels", in 4th International Conference on Robotics, Electrical and Signal Processing Techniques (4th ICREST), 2025. [doi](#)
10. M.R. Hazari, and **M.A. Talha** et al, "Performance Analysis of Hybrid Power System with Wind Farms and Conventional Generators under Fault Conditions", in 10th International Conference on Business and Industrial Research (ICBIR), 2025. [doi](#)
11. **M.A. Talha** et al, "Dynamic Optimization of Operation Cost and CO2 Emission Using Moth Flame Optimization Algorithm", in 4th International Conference on Robotics, Electrical and Signal Processing Techniques (4th ICREST), 2025. [doi](#)
12. **M. A. Talha** et al., "Stability analysis of PMSG-based wind farms under three-phase ground faults in hybrid power systems," in 2025 International Conference on Quantum Photonics, Artificial Intelligence, and Networking (QPAIN), 2025. [doi](#)
13. **M. A. Talha** et al., "Evaluating machine learning techniques for cybersecurity threat detection," in 2025 28th International Conference on Computer and Information Technology (ICCIT), 2025, pp. 2288–2293. [doi](#)
14. **M. A. Talha**, F. S. Al-Ismail, and M. A. Gaffar, "Multi-objective optimization of EVCS and DGs placement under varying load scenarios in radial distribution system," in 2025 9th International Conference on Power and Energy Engineering (ICPEE), 2025, pp. 332–337. [doi](#)

#### Book Chapters (Published)

1. **M.A. Talha** et al., "AI-driven multilayered cybersecurity intelligence framework for critical infrastructure protection," in *Communications in Computer and Information Science*, Cham: Springer Nature Switzerland, 2025, pp. 31–45. [doi](#)

\*\*\*Full publication list available via my [Google Scholar \[Md Abu Talha\]](#) (Citations: 118; h-index: 6; i10-index: 4) and [ORCID \[Md Abu Talha\]](#)

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#### PEER REVIEWER

##### (Journals)

1. Journal of Industrial Information Integration,
2. Sustainable energy, grids and networks,
3. Ad hoc networks,
4. Applied energy

##### (Conferences)

1. IEEE International Conference on Artificial Intelligence in Engineering and Technology (IICAJET2025), UMS, Malaysia.
2. IEEE International Conference on Next-Generation Computing, IoT and Machine Learning (NCIM 2025), DUET, Bangladesh.

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#### CERTIFICATIONS

##### Award

1. 1st Place (Best Poster Award), IEEE DAY 2023 Poster Presentation Competition, October 2023.
2. 2nd Runners-Up, Chess, AIUB Indoor Games Competition, 2018.
3. Certificate of Appreciation, Awarded to 'Team Nerds Power' at ProCon 2023 for the Pitching Competition.

##### Workshop

1. Workshop on Clean Energy Solutions and Careers for University Students, USAID, March 2024.
2. Workplace Basic Safety Training, Samsung C&T Safety Academy, December 2021.

##### Professional

1. Project Management Professional (PMP) Certification full course by Edureka, March 2023.

##### Training

1. Certificate of Appreciation, YPCON 2023, for the session Ins & Outs of Research Publication.
2. Certificate of Participation, SympSIST 2023, for the Humanitarian Project Idea Contest.

##### Presentation

1. Recipient of multiple Certificates of Appreciation from international conferences (ICCIT, ICPS, ICEEICT, ICISSET, ICECE, SPICSCON, and many more) across Bangladesh, China, the United States, Indonesia, Thailand, and India.

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#### COCURRICULAR ACTIVITIES

##### Membership

1. Member of IEEE; Engineering Students Association of Bangladesh (ESAB); and AIUB Community of Engineering Students (ACES)

##### Activities

1. Content Writer at [engineersdiarybd.com \[My Profile Link\]](#)
2. Former District Coordinator at Youth Parliament; and ARROSH Foundation.
3. Former Campus Ambassador of Cyber Crime Awareness Foundation at AIUB.

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#### ENGLISH PROFICIENCY

TOEFL iBT: Overall Score- **102/120** (Reading: 22, Listening: 29, Speaking: 22, Writing: 29) [\[PDF\]](#)

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#### SKILLS & STRENGTHS

Research Proficiency: Strong expertise in literature review, experimental design, and data analysis. Skilled in both qualitative and quantitative methodologies with experience in mentoring and guiding research projects.

Technical Expertise: Language- Python, C++, Machine Learning (ML), Artificial Intelligence (AI), Metaheuristic optimization algorithms. Software- MATLAB, Arduino, Proteus, PSpice, Simulink, ETAP, PVSyst, Homer Pro, LTSpice, PCB Designing, Circuit Designing, Origin.

Communication Skills: Proficient in technical writing and presenting research findings effectively through reports, papers, and presentations.

Strengths: Quick learner, Team leadership, Adaptability, and Effective communication.