KAZI MOHAMMED OMAR ALIF

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POST SECONDARY EDUCATION

BACHELOR OF SCIENCE IN ELECTRICAL AND ELECTRONIC ENGINEERING **01/2019 – 03/2023**

BRAC University, Dhaka, Bangladesh

Final Year Design Project (FYDP): "Foldable and portable solar module-based energy generation system to meet communication sector power demand in military remote camps", Supervised by Professor Mohammed Belal Hossain Bhuian

Final grade 3.35 (out of 4)

WORK EXPERIENCE

RESEARCH ASSISTANT, BRAC JAMES P GRANT SCHOOL OF PUBLIC HEALTH **09/2023 – CURRENT**

- Generating comprehensive factory-based case studies and conducting thorough techno-economic assessments of Renewable Energy Technology (RET) projects using quantitative data analysis and various stochastic approaches, assisting in proposal writing, budget preparation, and resource allocation planning for interdisciplinary projects focused on decarbonization and green transition strategies. Performing extensive literature reviews to support research objectives.
- Led the development of tools for a large-scale survey within the apparel sector, covering 1000+ RMG factories and trained a team of 40 Field Research Assistants (FRA) to effectively conduct the survey, ensuring data accuracy.

GRADUATE TRAINEE ENGINEER, E&G ENGINEERING LTD, Dhaka **04/2023 – 09/2023**

- Designing electrical systems and conducting erection, testing, commissioning of transformers as per site requirement
- Led the control panel design, BOQ preparation, and automation of a double-stage transformer oil centrifugal machine while supervising six employees.

RESEARCH INTEREST

Data-Driven Energy Management, Energy Transition and Policy Integration, Techno-Economic Assessment and Probabilistic Modeling, Intelligent Control and Power Electronics for PV-Grid Integration.

PROJECT

- Exploring the Adoption of Renewable Energy Technology (RET) among Apparel Exporters in Bangladesh: Policy Landscape, Current Capacities, and Future Pathways (Funded by International Growth Centre, IGC)

  P.I: Atonu Rabbani, Ph.D, Co-PI: A.S Nazmul Huda, PhD

  Investigating the decarbonization strategies adopted by pharmaceutical factories in Bangladesh, while also assessing the awareness, adoption, and challenges of integrating renewable energy technologies and evaluating their techno-economic feasibility under different financing models based on performance indicators.
- Exploring Bangladesh's Green Transition: De-carbonization in Pharmaceutical Industry
  P.I: Mohd. Raeed Jamiruddin, PhD
  Research Grant Award, Research Seed Grant Initiative 2024, BRAC University
  A first-of-its-kind techno-economic feasibility analysis focusing on rooftop PV installations in the RMG industry of Bangladesh. It compares the performance of industrial solar roof installations of varying capacities based on their financing models and highlights their potential to promote sustainable energy practices in the industry.
- Design and Development of a Double Stage Transformer Oil Centrifugal Machine
- Arduino Uno Controlled Robo-Soccer bot

PUBLICATIONS

- F. T. Khan, M. N. Rashid, K. M. O. Alif and A. S. Nazmul Huda, "A Data-Driven Approach for Comparative Estimation of Solar PV Output in Dhaka Using Various Tilt Angle Optimization Techniques," 2024 7th International Conference on Development in Renewable Energy Technology (ICDRET), Dhaka, Bangladesh, 2024, pp. 1-6, doi: 10.1109/ICDRET60388.2024.10503759
- Probabilistic financial profitability analysis of an operational industrial rooftop solar system using Monte Carlo simulation and EFAST-based sensitivity assessment (Under Review)

ONGOING WORKS

- Empirical performance analysis of an operational solar photovoltaic system in a ready-made garment factory
- Integrated Control with Fault-Tolerant Feature of a Hybrid PV-Grid System Using SEPIC Regulation for Dynamic Charging and Load optimization

HONOURS AND AWARDS

- **Champion at Spectra 2.0 –** BRAC University Electrical and Electronic Club
    - Soccer Bot Segment
- **Second Runners-Up at COVID-19 Combatants Unification Competition –** IEEE Computer Society- Brac University Student Branch Chapter
  Problem-based Brainstorming Article writing

LANGUAGE SKILLS

- BENGALI (Native)
- ENGLISH (Fluent)
- FRENCH (Beginner)

DIGITAL SKILLS

- **Modelling and Simulation tools:** PSSE (Siemens) | (Solar Energy) PVsyst, SAM, RETSCREEN | AutoCad 2D -3D | POWERWORLD
- **Programming and Analytical Software:** Matlab/Simulink | Arduino CC | Python

LEADERSHIP EXPERIENCE

Assistant Director, Editorial and Publications Department, BRAC University Electrical and Electronic Club (**BUEEC**)

- Organized an Intra BUEEC Writing Competition titled "**Electroditor".**
- Managed regular editorial reports and articles.