Dewan Mohammad Asad

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💼 Professional Experience

Research Assistant   06/2024 – Present
RISE,BUET   Dhaka, Bangladesh

Intern   11/2023
BREB   Dhaka, Bangladesh

🌐 Research Experience

Postgraduate Thesis (Tentative): Estimating Energy Requirements for Multi-Route Urban Commutes Using Real-Time Traffic and Elevation Data (June 2024 - Present):
• Supervisor: Dr. Muhammad Abdullah Arafat, Associate Professor, Department of EEE, BUET
This research explores developing an energy optimization model for EVs using real-time traffic and elevation data to forecast demand across multi-route commutes.

Advanced Control Techniques for SEPIC Converters:
Performance Analysis and Optimization(May 2023 - Present):
• Supervisor: Dr. A.B.M. Harun-Ur Rashid, Head of the Depeapartment, EEE, BUET
This work explores to achieve better trainsient performance for DC-DC converters specially in SEPIC Converters.

📚 Publications

• **Dewan Mohammad Asad**, Md. Ashikur Rahman Any, and A.B.M. Harun-Ur Rashid, "Optimizing LED Driver Transients Using ANN and ANFIS Control in SEPIC Converters," *2024 13th International Conference on Electrical and Computer Engineering (ICECE)*, Dhaka, Bangladesh, 2024, pp. 270-275, doi: 10.1109/ICECE64886.2024.11024909 🔗

• **Dewan Mohammad Asad**, Mahin Shahriar, and Abdul Hasib Chowdhury "Load Forecasting for Dhaka City Using RNN, LSTM, and GRU Architectures with Meteorological and Temporal Data," 2025 International Conference on Electrical, Computer and Communication Engineering (ECCE), Chittagong, Bangladesh, 2025, pp. 1-6, doi: 10.1109/ECCE64574.2025.11013779 🔗

🎓 Education

M.Sc. in Electrical and Electronic Engineering (EEE)   08/2024 – present
Bangladesh University of Engineering and Technology (BUET)   Dhaka, Bangladesh
• Major: **Electronics**

B.Sc. in Electrical and Electronic Engineering (EEE)   04/2019 – 06/2024
Bangladesh University of Engineering and Technology (BUET)   Dhaka, Bangladesh
• Major : **Power**
• CGPA : **3.63** (Out of 4.00)

Higher Secondary Certificate (HSC)   2016 – 2018
Notre Dame College   Dhaka, Bangladesh
• GPA: **5.00** (Out of 5.00)

Secondary School Certificate (SSC)   2016
Mohammadpur Government High School   Dhaka, Bangladesh
• GPA: **5.00** (Out of 5.00)

📁 Academic Projects

Hardware Projects

- **Smart Smoke Detector Using 74-Series ICs** || Digital Electronics Laboratory || Built a 74-series IC-based system (no microcontroller) to digitize smoke sensor output, featuring adjustable alarm thresholds and a 7-second auto-reset timer.
- **Adjustable DC Power Supply Generation** || Power Electronics Laboratory || Designed a lab-grade buck-boost power supply with wide voltage range and current-limiting protection for stable operation.
- **Weather Station Unit** || Communication System I Laboratory || Developed a system using Arduino and a LoRa module to transmit and receive weather sensor data from remote locations.
- **Human Following Robot** || Control System I Lab || Developed an Arduino-based robot with IR and ultrasonic sensors to detect and follow human presence.
- **Dual Axes Solar Tracker** || Microprocessors & Embedded Systems Lab || Developed a microcontroller based dual axis solar tracker for optimum solar power generation.

Software Projects

- **Electrical Design of a Building** || Electrical Services Design || Designed the ground and typical floor plans for a 9-storey, three-unit building, including fittings and fixtures, conduit layout, switchboard and distribution board diagrams, and a lightning protection system (LPS).
- **Panzer Fight (Arcade Game)** || Numerical Technique Lab || Developed a MATLAB-based multiplayer arcade game featuring panzer combat with shell-firing mechanics, dynamic barriers, and adjustable difficulty levels.
- **Audio Frequency Filters** || Electronic Circuits II Lab || Simulated and designed active/passive bandpass/lowpass/highpass filters in Proteus, optimizing performance for precise frequency response.
- **Classification of Tumours from MRI Images** || Digital Signal Processing I Lab || Classified four classes of tumors with the help of MATLAB image processing toolbox and Machine learning toolbox.
- **PSO Based Load Frequency Control** || Power Systems II Lab || Developed a Particle Swarm Optimization Based Load Frequency Control system in SIMULINK

🏅 Achievements & Awards

Dean's List
- Recipient of Dean's List Scholarship for the year for academic excellence in 2020

Admission Test Scholarship
- Recipient of Scholarship for excellent position in BUET admission test exam

🧠 Skills

Programming
- Verilog, Arduino, STM-32, Assembly, C/C++, C#, Python, MATLAB, Java, JavasSript, TypeScript, PHP, LaTeX, HTML, CSS, JavaScript, React, NextJS, Django.

Softwares
- Keil-uVision4, Keil-uVision5, Quartus (Verilog) , PyCharm, PSpice, LTspice, AutoCAD, Proteus, Arduino, MATLAB, Simulink, PSAF, Cisco Packet Tracer, Altium, Adobe Illustrator & Premier Pro, Overleaf (LaTex), Powerpoint, Excel, Word etc.

👤 References

Dr. A. B. M. Harun-Ur-Rashid, *Professor & Head,* Department of EEE, BUET
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Dr. Muhammad Abdullah Arafat, *Associate Professor,* Department of EEE, BUET
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Dr. Quazi Deen Mohd Khosru, *Professor,* Department of EEE, BUET
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