Mahin Shahriar

Fresh Graduate
Department of Electrical Electronic and Engineering (EEE)
Bangladesh University of Engineering and Technology (BUET)
Dhaka, Bangladesh

Phone: +880-17990331150
Email: mahinshahriar10@gmail.com
Github Link: MahinShahriar1
Linkedin: mahin-shahriar-977748241

Education

- **Bangladesh University of Engineering and Technology (BUET)** April 2019 - July 2024
  BSc. in Electrical Electronic and Engineering Dhaka, Bangladesh
  - CGPA: **3.72**/**4.00** (Major Electrical Energy and Power Systems (EEPS) **3.86**)

- **Notre Dame College (NDC)** July 2016 - October 2018
  Higher Secondary Certificate Dhaka, Bangladesh
  - GPA: **5.00**/**5.00**
  - General scholarship recipient

Research Interest

Implementation of **AI** in power systems, smart grids, microgrids, power system protection, high voltage engineering, and power electronics.

Research Experience

- **Detection & Classification of Transmission Line Faults Using CNNs and ViTs** (UG Thesis) July'23-June'24
  The thesis focuses on creating custom datasets for complex power system networks using efficient algorithms within Simulink models. It leverages convolutional neural network architecture and computer vision techniques to improve performance and accuracy.

Professional Experiences

- **Academic Internship:** Completed a **thirteen-day** academic internship program organized by the **Dhaka Electricity Supply Company (DESCO)** .

Projects

- **Power Flow Analysis of IEEE 5 Bus using Artificial Neural Network** (Course Project) (2024)
  Power flow analysis was conducted on an IEEE five-bus system to study phenomena such as over/under voltage and overloads using an **ANN** architecture. The project aimed to overcome the limitations of traditional power flow algorithms such as Newton's Raphson and the Fast Decouple method.
  - **Project Link:** https://github.com/MahinShahriar1/Power_Project-on-ANN
  - **Tools & Technology:** MATLAB, Python

- **Electric Service Design** (Course Project) (2024)
  This project focuses on developing a precise electrical plan to ensure tenant comfort and safety while converting a residential property into a ten-story complex, incorporating modern features such as a garage and a rooftop pool.
  - **Project Link:** https://github.com/MahinShahriar1/Electric-Service-Design-Project
  - **Tools & Technology:** AutoCAD

- **Build-an-8-bit-computer-from-scratch (Inspired by Ben Eater)** (Course Project) (2023)
  This project aims to build an 8-bit SAP (Simple As Possible) computer on a breadboard from scratch, inspired by Ben Eater's schematics.

– **Project Link:** https://github.com/MahinShahriar1/Build-an-8-bit-computer-from-scratch-Inspired-by-Ben-Eater
– **Tools & Technology:** Electronics Components, Proteus

• **One Hour POMORDO Clock** (Course Project) (2022)

This project emphasizes the fabrication of a digital clock capable of performing various clock mechanisms, including a stopwatch and timer.

– **Project Link:** https://github.com/MahinShahriar1/Digital_Electronics_Project
– **Tools & Technology:** Proteus

• **Epileptic Seizure Detection using EEG Signal Processing** (Course Project) (2022)

This project focuses on implementing an **LDA** machine learning model to detect epileptic seizures.

– **Project Link:** https://github.com/MahinShahriar1/DSP_Project
– **Tools & Technology:** MATLAB

• **Advanced Home Automation System with WiFi & Mobile App Based Interface** (Course Project) (2022)

This project utilized WiFi **ESP32/IoT** modules and the **Blynk** mobile app to establish wireless connectivity for controlling appliances such as lights, fans, and monitors. It also enabled the saving of real-time sensor data on a mobile device or the **Blynk** server.

– **Project Link:** https://github.com/MahinShahriar1/Control-System-Project
– **Tools & Technology:** IoT based electronics components, Arduino

• **Panzer Fight(Arcade Game)** (Course Project) (2021)

The game was based on the Gauss-Jordan method with pivot. Two panzers fire shells at each other, with three walls placed between them as barriers.

– **Project Link:** https://github.com/MahinShahriar1/MATLAB$_{Project}$
– **Tools & Technology:** MATLAB

Skills

- **ML Frameworks and Libraries:** Deep Neural Network (using TensorFlow and Keras and Pytorch), Image processing (using OpenCV)
- **Hardware Skills:** Arduino, FPGA, ATMGEA32
- **Languages:** English (Professional), Bengali (Native)
- **Performing Arts:** Public Speaking
- **Document Preparation:** Overleaf(LaTex), Microsoft Office, Microsoft Excel, Microsoft Word, Microsoft Power-point
- **Programming Languages:** C/C++, Python, System Verilog, MATLAB
- **Tools and Technology:** Simulink, Quartus, Pycharm, ModelSim, PSpice, Proteus, AutoCAD, PSAF

Awards & Achievements

- EEE Faculty **Dean's List Award** (Level 2/ Term 2, Level 4/Term 1 and Term 2, University Merit Scholarship from BUET.
- **Board scholarships** e.g., HSC, SSC.

References