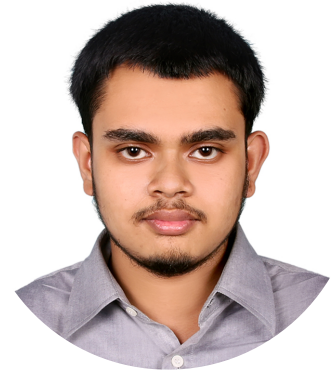


MD. MAHBUB ALI

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🌐 github.com/Md-Mahbub-Ali 🌐



CAREER OBJECTIVE

Aim to be placed in an organized research and development sector where my engineering skills can be utilized and implemented through electrical processes and applications.

WORK EXPERIENCE

Research and Development Intern

Aqualink Bangladesh Limited 🌐

📅 2022 (January - March)

- Developed a few protection circuit schematic designs and applied them to a variety of advanced electronics system designs.
- Experienced with the installation and operation of an IoT-based I/O controller device on the panel board to control the exhaust centrifugal fan using a variable frequency drive (VFD).

Junior Electrical Engineer

Vendy.Ltd 🌐

📅 2021 (February - September)

- Designed a compact circuit using AUTODESK EAGLE for the vending machines' main-board containing Node-Mcu, shift register, DF-player, RIFD module, OLED, Buzzer, LED along with DC-DC converting feature.
- Designed several necessary driving circuits for the particular vending machines(Book, Sanitary napkin, Bottle vending machine).

EDUCATION

B.Sc in Electrical and Electronic Engineering

BRAC University

CGPA 3.13

📅 2016 - 2021

📍 66, Mohakhali, Dhaka-1212

Higher Secondary School Certificate

Govt. Science College

GPA 4.17

📅 2015

📍 Tejgaon, Dhaka-1215

Secondary School Certificate

Dhanmondi Govt Boys' High School

GPA 5.00

📅 2013

📍 Dhanmondi, Dhaka-1207

PROJECTS

IoT Based Air Quality Monitoring System 📅 2019

- Stored real time gas data to Adafruit.io using ESP8266 through MQTT protocol.
- Monitored the gas density from the environmental air and objectified the limit.

IoT Based Rooftop Environment Quality Monitor and Plant Irrigation System

📅 2019

- Monitored the soil moisture from the plant soil and control irrigation system with objectifying the limit.
- Stored real time environmental air temperature, humidity, gas data to Adafruit.io through MQTT protocol.

Car Accident Surveiling System

📅 2018

- Detected car accident by observing sonar sensor and accelerometer reading using Arduino.
- Found the accidental spot from offline GPS location and sent text notification through GSM module.

Home Automation

📅 2017

- Interfaced with all the relevant basic featured sensors using Arduino.
- Saved electrical energy based on day-light along with observed the room temperature.
- Alarm feature focused for gas leakage and theft issues.

DC Converter

📅 2017

- Converter could supply 3A and voltage could be regulated from 0V to 13V.
- Developed with battery overcharge and reverse polarity protection.

BRACU Mongol Tori 🌐 (Group) 📅 2017-2019

An astronaut assistant rover featured with both remote and automated system.

- Compact circuit setup maintaining lower impedance.
- Designed custom 60A power switch using relay mechanism.
- Custom built power distribution system.

RESEARCH PROJECTS

Design and Optimization of a Solar-Powered Water Pumping System for Irrigation and Water Storage Purpose (Group) 📅 2021

- Designed a water pumping system using solar power as the primary source of energy.
- Applied proper water management system including hydro storage feature.

Performance study of bifacial module based time varying Multilevel Solar Panel System (MSPS) (Group) 📅 2020

- Observed the significance of multilevel Bi-facial PV panel in urban area.
- Applied ASHRAE clear-sky solar flux model.

PUBLICATIONS

- Performance Investigation of Bifacial Module Based Time Varying Multilevel Solar Panel System.
DOI:10.1109/PVSC43889.2021.9518456 🔗
- A Compact and Lightweight Astronaut Assistance Rover with Robust Validation.

SKILLS

Proficient in:

- Software: Proteus, Autodesk-Eagle, Matlab

Worked with:

- Software: Altium, Arduino IDE, Scilab, SketchUp, LabVIEW, Microwind, Quartus
- Programming Language: Embedded C++, Java
- Other Tools: HTML, CSS

ACHIEVEMENTS

Participated in University Rover Challenge (Mongol Tori)

📅 2019 📍 Utah, USA

1st Runners Up of ICT Award (Agricultural Robot)

Organized by BASIS Foundation

📅 2018 📍 Bangladesh

2nd Runners Up in Digital World (Mongol Tori)

Organized by ICT Division

📅 2018 📍 Bangladesh

2nd Runners Up in Indian Rover Challenge (Mongol Tori)

📅 2018 📍 Vellore, India

13th Place out of 36 International Teams in University Rover Challenge (Mongol Tori)

📅 2018 📍 Utah, USA

Participated in Robowars (Battle-bot)

Techfest-2017-2018

📅 2018 📍 IIT BOMBAY, INDIA

WORKSHOPS/CERTIFICATIONS

Matlab Simulink (Online)

Organized by BRAC IEEE Student Branch

📅 October 2020

National Power & Energy Hackathon
Anti-Theft Operation and Renewable Energy

📅 September 2018

Eagle PCB Design

Organized by BRAC IEEE Student Branch

📅 May 2018

Instructor of Workshop on Basic Arduino

Organized by BRAC University Electrical and Electronic Club 📅 March 2018

LICT TOP-UP IT Training for Web Development

NASSCOM IT-ITES Sector Skill Council (SSC)

📅 March 2018

Basics of Robotics

Organized by BRAC University Robotics Club

📅 April 2016

EXTRA CURRICULAR

Director of R & D Department

BRAC University Electrical and Electronic Club

📅 February 2019 - February 2020

- Took a workshop on implementation of basic electronics.
- A couple of interesting DIY showcase projects had been developed.

Team Lead of Electronics Department

BRACU Mongol Tori

📅 June 2018 - December 2019

- Learned team-work strategy, under the supervision of the Professor and the seniors.
- Applied certain leadership quality, while working with the juniors.

Executive of Human Resource Department

BRAC University Robotics Club

📅 February 2017 - June 2017

- Learned and applied certain abilities related to human resource management using Microsoft Office, such as Excel, Word, PowerPoint and web-based Google editors, such as Google Sheet, Google Calendar, and Google Form.

REFERENCE

Dr. Md. Mosaddequr Rahman

Professor & Chairperson, EEE Department
BRAC University

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