Md. Safin Mahmood Shomyo

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A passionate, hard-working, goal-oriented, punctual engineer who is committed to Expand the knowledge within this field all while having a strong work ethic.

EDUCATION

Ahsanullah University of Science and Technology	2026
M.Sc in Electrical and Electronic Engineering	*Spring 2024*
Islamic University of Technology	June 2024
B.Sc in Electrical and Electronic Engineering	*CGPA: 3.05/4.0*
Notre Dame College (Dhaka)	2019
Science	*GPA: 5.0/5.0*
Government Laboratory High School (Dhaka)	2017
Science	*GPA: 5.0/5.0*

Courses: Engineering Physics I — Engineering Physics II — Semiconductor Devices — Electromagnetic Fields and Waves

SKILLS

Languages: Matlab, C, C++, Python, TCL, Verilog, HDL
Data Analysis: Numpy, Pandas, Matplotlib, Seaborn
Software: Quantum Espresso, VESTA, MICROWIND, DSCH, Quartus 2, Cadence Innovus, Cadence Genus, Proteus, PsPice, TinkerCAD, Autodesk Eagle, KiCAD

RESEARCH INTEREST

Material Science - VLSI

PUBLICATIONS

Optimizing Maternal Mental Health: A Study on Boosting Algorithms for Suicidal Tendencies Prediction in Postpartum Depression | *ICICT 2024, IEEE Conferences*

- Contribution: Fourth Author

RESEARCH PROJECTS (ONGOING)

Electronic Properties of Black Phosphorus using DFT and Quantum Espresso (THESIS)

- The Objective of this project is to generate band structures for Black Phosphorus element in both Mono layered and Bi Layered Stages. Band structures with and without strains (only for Bi layered Stages) were also generated in this process using uantum Espresso. Strains were 4 percents and -4 percents. Lattice structures and atomic positions are generated through VESTA .The overall findings reflect the bending nature of Black Phosphorus for both mono layer and Bi layer stages

Insulation Property Analysis for HFO2, Al2O3, ZrO2, using Black Phosphorus

- The objective of this project is to Analysis the insulation properties for HfO2, Al2O3, ZrO2 with a combination of Black Phosphorus. The whole computational part is done using Quantum Espresso. Comparing the band structures and conductivity, the best material can be chosen for further insulation

PEER REVIEWING EXPERIENCES

1. IEEE IATMSI 2025 | *Reviewer*   2024

* Reviewed 5 conference papers in the topic of Artificial Intelligence (AI), IOT and Computer Vision Enabled Technologies

2. IEEE SusTech 2025 | *Reviewer*   2024

* Reviewed 6 conference papers in the topic of
  1. Smart and Micro Grids: AI/ML for Smart and Micro Grids
  2. Energy Efficiency: energy savings controls;
  3. Material Science
  4. Electric and Autonomous Vehicle

TRAININGS

Physical Design | *Trainee*   2024

* Currently the Physical Design Trainee at VLSI Training Center (Tahoe) where I have learnt Linux, Verilog, Library Preparation, Logic Synthesis, LEC, Floor Plan, STA,TK, Routing, Static Timing Analysis. Duration: 3 Months

Institute of Nuclear Science and Technology | *Industrial trainee*   2023

* Visited the Nuclear Reactor and all its machinery to gain hands-on experience and knowledge on the operation and functionality of the reactor. Duration: 1 week

PCB Design | *Trainee*   2021

* Learnt PCB Design using Autodesk Eagle and KiCAD from a workshop called 'PCB design and fabrication' organized by the IEEE Robotics and Automation Society IIUC Student Chapter in coordination with the IEEE IIUC Student Branch. Duration: 1 Months

EXTRACURRICULAR ACTIVITIES/ AWARDS

IEEE IUT Student Branch   2023

* Vice-Chairperson. where I contributed in organizing technical workshop on machine learning, seminar on VLSI Job Prospects with Neural Semiconductor

Runner-up (IoT) - Grameenphone Limited X Cisco 4IR Quiz Competition   2023

REFERENCE

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