

## ABOUT ME

Passionate Mechanical Engineering graduate with strong interests in composite materials, computational mechanics, and advanced manufacturing technologies. I aim to explore the mechanical behavior of engineered materials and structures through a combination of simulation, CAD/CAM design, and experimental validation. My goal is to contribute to research that enhances structural reliability, material efficiency, and sustainability, while bridging the gap between theory and practical engineering applications.

## EDUCATION

B.Sc. in Mechanical Engineering  
Khulna University of Engineering & Technology (KUET), Khulna, Bangladesh

2017 – 2022 | **CGPA: 3.45 / 4.00 (Last 2 years: 3.49)**

Thesis: Computational Study of Multi-layer Printed Circuit Boards Under Bending Load

## POST-GRADUATION ACTIVITIES (2022 – PRESENT)

- **Research & Publication:** Conducted research on composite materials and PCB bending, resulting in one peer-reviewed paper (Hybrid Advances, 2023).
- **Skill Development:** Enhanced expertise in CAD (SolidWorks, AutoCAD), simulation (ABAQUS), and programming (Python, MATLAB, C).
- **Family Business (Twisting Mill):** Managed operations, workforce, and production. Applied mechanical knowledge to address technical issues such as shaft fatigue, machine vibration, and bending failure of components—linking academic research to real-world industrial challenges. *(Supervised a team of 8 workers and improved production efficiency by 10%).*
- **Graduate Preparation:** Completed IELTS and GRE examinations as part of graduate school application requirements.

## PUBLICATION

Journal

Islam, M.N., Anwar, M.S., Islam, M.S., Arifuzzaman, M., and Al Bari, M.A., 2023.

Bending analysis of glass fiber reinforced epoxy composites/copper-clad laminates for multi-layer printed circuit boards. Hybrid Advances, 4, p.100090. [DOI](#) (This study provides a finite element analysis of the bending behavior of multi-layer printed circuit boards, highlighting the effect of ply orientation and lamina thickness on mechanical performance.)

## PROJECT

- **Design and Fabrication of Manual Die-cutting Machine** (Supervisor: Dr. Md. Kutub Uddin) – Academic

This project involves the design, analysis, and fabrication of a low-cost, hand-operated die-cutting machine for small-scale applications. The goal is to create a robust and efficient device that uses a lever or rolling mechanism to apply uniform pressure, enabling precise and repeatable cuts in materials like paper, cardstock, felt, and leather.

## ENGINEERING SKILLS

- CAD/CAM: **AutoCAD**, SolidWorks
- Simulation: **ABAQUS**, Ansys
- Programming: **C**, Python (Basic), MATLAB
- Data Visualization: **OriginPro**
- Composite Materials: Glass fiber reinforced epoxy laminates
- Hands-On Machines: **UTM**, CNC, Lathe, Milling, Drilling, Shaper, Welding, Grinding
- Other Skills: **Academic writing**, creativity, business management, problem-solving

## TRAINING

Training in AutoCAD, SolidWorks	CADers, KUET
Programming & Introduction to Robotics Workshop	LOOP, KUET (2018)
Training in CNC, CAM & 3D Printing	Academic

## IELTS AND GRE SCORE

IELTS	Overall	Listening	Reading	Writing	Speaking
	6.5	7.5	7.5	6	5.5

GRE	Total	Quantitative	Verbal	Analytical Writing
	296	157	139	2.5

## HONORS AND AWARDS

- University Technical Scholarship (2016–2020, four consecutive years)
- Inter-departmental Indoor Carom Competition – 2nd Position

## CERTIFICATIONS

- Introduction to Programming with MATLAB – Vanderbilt University (Coursera, 2020), Cert. ID: W8RVRUDCBRCY
- Excel Skills for Business (Essential to Advanced) – Macquarie University (Coursera, 2020), Cert. ID: 4Z2ACTNRCKKQ

## PROFESSIONAL & INDUSTRIAL ACTIVITIES

- Industrial Visit to Port of Chittagong, Chittagong, Bangladesh (Familiarized with port material handling technologies), December 2021
- Industrial Visit to Chittagong Dry Dock Ltd, Chittagong, Bangladesh. (A shipbuilding and repair facility operated by the Bangladesh Navy), December 2021
- Industrial Visit to Eastern Refinery Ltd, Chittagong, Bangladesh (Familiarized with the techniques and technologies of crude oil processing), December 2021

## REFERENCES

**Dr. Md. Shariful Islam** (*Thesis Supervisor*)

Professor, Department of Mechanical Engineering, KUET

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## DECLARATION

I hereby declare that the information mentioned above is true to the best of my knowledge.