

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

Email: msislam@me.kuet.ac.bd

+88 01779 876378

Dr. Md. Arifuzzaman

Professor, Department of Mechanical Engineering, KUET

Email: arif48@me.kuet.ac.bd

Phone: +88-02477733351-69, Ext. 431

Somnath Somadder

Assistant Professor, Department of Mechanical Engineering, KUET

Email: somnath@me.kuet.ac.bd

Phone: +88 01752 292813

DECLARATION

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