

**MOHAMMAD ASHRAFUL ISLAM**

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## Summary

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I am a recent mechanical engineering graduate (July, 2025) from Chittagong University of Engineering & Technology (CUET) and currently working as a Research Assistant (RA), driven by a strong passion for research and problem solving. With proven skills in research methodology, data analysis and project management, I am eager to pursue a master's or Ph.D. program to further advance my academic and professional growth. I am also actively seeking Graduate Assistantship opportunity to deepen my involvement in research and contribute to scholarly excellence. My ultimate goal is to make a meaningful impact in the field of mechanical engineering by applying my research expertise, collaborative mindset, and analytical skills to innovative and impactful projects.

## Academic credentials

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Bachelor of Science (B.Sc.) in Mechanical Engineering, Chittagong University of Engineering & Technology. CGPA: 3.45 out of 4.00 (Last two Semester GPA: 3.84/4), (Class position 20% of 180 students)

## Research Experience

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- ❖ **Research Assistant at Bio-Fuel & Energy lab**, Department of Mechanical Engineering, Chittagong University of Engineering & Technology (CUET).
- ❖ **Project Name:** Numerical and Experimental Investigation of Thermo-Catalytic Pyrolysis of Biomass for Bio-Fuel Production.

## Undergraduate Thesis Work

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- ❖ **Topic:** Fabrication and Performance Analysis of Automobile Brake Pad (Car disc brake), Using Eco-Friendly and Recycled Materials.
- ❖ **Objectives:** To fabricate automobile disc brake pad (Car), analyze the performances and introduce sustainable solution of automotive parts.

## Research Interest

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Computational Fluid Dynamics (CFD) | Materials & Metallurgy | Heat transfer | Combustion | IC Engine |

## Publications

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- ❖ MD Ashraful Islam, MD Mizanur Rahman, Abu Bakkar (2025) "Fabrication and Performance Analysis of Automobile Brake Pad (Car disc brake), Using Eco-Friendly and Recycled Materials." 8<sup>th</sup> International Conference on Mechanical Engineering and Renewable Energy. (Under review)

## Language Proficiency

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- ❖ I will take my IELTS on next month.

## Software Proficiency

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- ❖ **CAD and Simulation:** ANSYS, ANSYS FLUENT, SOLIDWORK, AutoCAD, Aspen plus, OpenFoam.
- ❖ **Image processing:** Adobe Illustrator, Adobe Photoshop, ParaView.
- ❖ **Basic Software:** Microsoft Word, Power point, Excel, latex.
- ❖ **Programming Language:** MATLAB, Python, C Programming, FORTAN

## Professional Expertise

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- ❖ **Research Assistant (RA)-(18<sup>th</sup> September,2025-Present)**  
Chittagong University of Engineering & Technology (CUET)
  - Conducting numerical modeling and experimental analysis to optimize thermos-catalytic pyrolysis for bio-fuel generation.
  - Data-driven process optimization to enhance fuel-yield and quality.
  - Collaborating computational and experimental approaches to advance renewable energy technologies.
- ❖ **Internship:** Three weeks of industrial training at Super Petrochemical Limited (SPL) in Chittagong, Bangladesh.  
**Activity:** Acquired hands-on knowledge in Naphtha processing unit, rotating and static maintenance, inventory management, fabrication and welding, and process control systems. Developed a solid understanding of plant operations and maintenance strategies.
- ❖ I have two years of teaching experience in a coaching center, where I taught Chemistry to higher secondary students, enhancing my communication, mentoring and leadership skills.

## Extra-Curricular Activities

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- ❖ **Team Leader,** Super Petrochemical Limited (SPL), Chittagong (February 2025-March 2025).  
**Activity:** Led a team of three trainees, coordinating tasks and promoting collaboration.
- ❖ **Executive Member,** Robo Mechatronics Association (RMA) (February 2022-June 2024).
- ❖ **Executive Member,** Joyoddhoney (Cultural Club).
- ❖ **Executive Member,** Green for Peace (Social Club).
- ❖ **Team Leader,** Stage Drama Team.

## Achievements

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- ❖ Got scholarship in Junior School Certificate (JSC), secure 7<sup>th</sup> place in my region.
- ❖ Got merit scholarship from department of Mechanical Engineering (CUET).

## References

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Relation: UG Thesis Supervisor &  
Project Leader of my research.

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Relation: Course Teacher.

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