# Md. Motiur Rahman

**Passport:** A10958863

**Date of birth:** 2 Sep 1998

**Place of birth:** Dhaka, Bangladesh

**Nationality:** Bangladeshi

**Gender:** Male

## CONTACT


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## ABOUT ME

Motivated Mechanical Engineer with a solid foundation in computer-aided design (CAD), computational simulations (CFD/FEM), and engineering analysis. Passionate about system optimization, sustainable design, and effective project coordination. Eager to contribute to engineering teams and grow in both technical and managerial roles.

## WORK EXPERIENCE

**International University of Business Agriculture and Technology** Dhaka, Bangladesh

**University research assistant**

2 Sep 2023 – Current

- Conducted CFD simulations using ANSYS Fluent and COMSOL for fluid flow and heat transfer analysis.
- Used Python and MATLAB for data processing, automation, and result visualization.
- Assisted in developing research methodology, running simulations, and analyzing results.
- Prepared technical reports, figures, and presentations for research documentation.
- Guided undergraduate students on CFD tools and supported their thesis projects.

**RANGS Workshop Limited** Dhaka, Bangladesh

**Trainee Engineer**

1 May 2023 – 1 Aug 2023

- Assisted in routine vehicle maintenance, including oil changes, brake inspections, and fluid level checks.
- Supported senior technicians in diagnosing mechanical and electrical issues using diagnostic tools.
- Observed and learned repair procedures on various automotive systems such as engines, transmissions, and suspensions.

## EDUCATION AND TRAINING

**6 JAN 2019 – 27 AUG 2023** Dhaka, Bangladesh

**Bachelor of Science** International University of Business Agriculture and Technology

**Website** www.iubat.edu | **Field of study** Mechanical Engineering | **Level in EQF** EQF level 6

**8 JUN 2015 – 23 JUL 2017** Dhaka, Bangladesh

**Higher Secondary Certificate** Khilgaon Government High School

**Website** www.khilgaonghs.edu.bd | **Field of study** Science | **Level in EQF** EQF level 4

**1 JAN 2013 – 30 MAY 2015** Dhaka, Bangladesh

**Secondary School Certificate** Khilgaon Government High School

**Website** www.khilgaonghs.edu.bd | **Field of study** Science | **Level in EQF** EQF level 3

## LANGUAGE SKILLS

**MOTHER TONGUE(S):** Bengali

**Other language(s):**

**English**

**Listening** C1
**Spoken production** B2
**Reading** C1
**Spoken interaction** B2
**Writing** B2

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## HONOURS AND AWARDS

**19 JUN 2021** International University of Business Agriculture and Technology

### Academic Excellence Award

Honored for outstanding academic excellence by maintaining a perfect CGPA of 4.00/4.00 in the Spring 2019 and Summer 2019.

## PROJECTS

**18 NOV 2025 – CURRENT**

### Mathematical Modeling of a Quadcopter/Multirotor Drone System in 3D Space

This is a small self-taught project to mathematically model a mechatronic system, such as a quadcopter/multirotor in 3D space, using high-level programming languages like MATLAB and Python.

**1 NOV 2025 – CURRENT**

### Design and Fabrication of a High-Efficiency Ceiling Fan Blade: A Computational Fluid-Structure Interaction Approach

This project utilizes computational methods such as computational fluid dynamics and structural analysis to design a highly efficient ceiling fan blade that is feasible to fabricate at low cost for both domestic and industrial use.

**1 SEP 2024 – 26 OCT 2025**

### Investigating the Feasibility of an Altitude-Adaptive de Laval Nozzle: A Numerical Study of the Flow Field

This research project numerically investigats the flow field behavior of a variable-geometry de Laval nozzle with altitude-adapting capability.

**1 NOV 2023 – 18 MAR 2025**

### Optimization of UAV Propeller for Enhanced Efficiency and Noise Reduction

Mentored this thesis project which was aimed to optimize a UAV propeller in terms of aerodynamic efficiency and noise reduction. Computational fluid dynamics techniques were used to optimize the propeller blade geometry, and an experimental setup (Propeller Testing Apparatus) was built to measure the performance of the optimized propellers.

**1 SEP 2022 – 25 SEP 2023**

### A New Method for Energy Efficient Ceiling Fan Blade Design: An Aerodynamic Approach

This thesis project applies advanced aerodynamic theories to the design of energy efficient ceiling fan blades. In addition, a CFD model was developed to evaluate the aerodynamic performance of these blades.

## SKILLS

**CAD/CAM**

AutoCAD | SolidWorks | FreeCAD

**ENGINEERING SIMULATION**

Ansys Workbench | COMSOL Multiphysics | OpenFOAM | Simulink

**PROGRAMMING LANGUAGE**

MATLAB | Python (computer programming) | C++

**PRODUCTIVITY SOFTWARE**

Microsoft Office: Word, Excel, Powerpoint, Outlook, OneNote

**MECHATRONICS**

Microcontroller | Programmable Logic Controller

**RESEARCH**

Hypothesis formulation | manage research data | perform data analysis | research writting

## NETWORKS AND MEMBERSHIPS

**1 FEB 2025 – CURRENT** IUBAT, Dhaka

### IUBAT Modeling and Computational Hub (IMACH)

Co-founder and mentor at IMACH, guiding undergraduate students in learning and applying computational methods for engineering simulation.

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Dhaka, Bangladesh, 10 Dec 2025

Md. Motiur Rahman