

# Md Fahad Rahman

Dhaka, Bangladesh | +880-176-097-9908 | [fahad9993@gmail.com](mailto:fahad9993@gmail.com) | [LinkedIn](#) | [Website](#) | [GitHub](#)

## RESEARCH INTERESTS

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Experimental Solid Mechanics • Smart and Viscoelastic Materials • Vibration, Acoustics, and Noise Control • Mechanical Design and Instrumentation • Computational Design and Data-Driven Optimization

## EDUCATION

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### Jahangirnagar University (JU)

*M.S. in Applied Statistics and Data Science (In Progress)*

Dhaka, Bangladesh

*Expected 2027*

### Bangladesh University of Engineering and Technology (BUET)

*B.Sc. in Mechanical Engineering*

Dhaka, Bangladesh

*2012 – 2017*

## RESEARCH EXPERIENCE

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### Undergraduate Thesis

2016 – 2017

*Bangladesh University of Engineering and Technology (BUET)*

*Dhaka, Bangladesh*

**Title:** Modification of the Experimental Setup for Measuring Viscoelastic Response of Superelastic Shape Memory Alloy under Bending and Twisting

**Supervisor:** Dr. M. Ashiqur Rahman, Professor, BUET

- Designed and fabricated low-cost experimental rigs for bending and torsional testing of NiTi SMA rods.
- Developed an Arduino-based semi-automatic data acquisition system for real-time load monitoring.
- Calibrated Force Sensing Resistors and derived stress-strain relationships for bending and torsional loading.
- Investigated stress relaxation behavior under constant strain using Maxwell and Voigt viscoelastic models.
- Processed and analyzed experimental datasets using MATLAB.
- Demonstrated time-dependent deformation behavior of SMA under bending and torsion across multiple loading angles.

## ACADEMIC PROJECTS

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### Automated Library System — Robotic Book Retrieval Prototype

2015

*Bangladesh University of Engineering and Technology (BUET)*

*Dhaka, Bangladesh*

- Designed robotic chassis and claw mechanisms using SolidWorks.
- Fabricated mechanical components from laser-cut acrylic sheets and assembled using solvent bonding techniques.
- Developed Arduino-based control system for servo-driven claw actuation and platform mobility.
- Integrated mechanical, electronic, and control subsystems into a functional prototype.
- Conducted iterative testing and performance evaluation to identify design limitations.
- Strengthened skills in rapid prototyping, mechanical design, and robotics system integration.

## PROFESSIONAL EXPERIENCE

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### Admin and Accounts Officer

Jan. 2022 – May 2022

*HISP Bangladesh Foundation*

*Dhaka, Bangladesh*

- Digitized payroll system using Electronic Funds Transfer (EFT), reducing processing time by 70%.
- Developed a custom financial tracking application to streamline reporting and documentation.

### Administrative Assistant

Jan. 2020 – Oct. 2021

*World Health Organization (WHO)*

*Dhaka, Bangladesh*

- Supported large-scale public health programs through administrative coordination and financial management.
- Coordinated with government and international partners for project implementation.

### Administrative Assistant

Nov. 2017 – Nov. 2018

*Directorate General of Health Services (DGHS)*

*Dhaka, Bangladesh*

- Provided administrative and logistical support for multi-agency health intervention programs.
- Assisted in documentation, staff coordination, and compliance activities.

### Industrial Trainee

Aug. 2016 (3 weeks)

*Khulna Power Company Ltd.*

*Khulna, Bangladesh*

- Observed overhaul and maintenance procedures of large Wärtsilä heavy fuel oil engines.
- Participated in industrial safety and operational training programs.

## TECHNICAL SKILLS

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**Experimental:** Material testing, sensor calibration, data acquisition systems

**Programming:** Python (NumPy, Pandas, Matplotlib), MATLAB, C

**Hardware:** Arduino Mega, Force Sensing Resistor (FSR)

**Design:** SolidWorks

**Documentation:** LaTeX

**Web Development:** React, Node.js, React Native, MongoDB

## STANDARDIZED TEST SCORES

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- GRE: 323 (Quantitative: 165, Verbal: 158, AWA: 3.5)
- IELTS: 7.5

## REFERENCES

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Available upon request