Md. Maruf Mullah

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ACADEMIC CREDENTIALS

B.Sc. in Mechanical Engineering, Military Institute of Science and Technology (MIST) Apr 2021 – May 2025
CGPA: 3.23 / 4.00

RESEARCH INTERESTS

- Autonomous System & Robotics
- Additive Manufacturing and Smart Fabrication Technologies
- Computational Mechanics and Numerical Modelling
- Data-Driven and Machine Learning Approaches in Engineering
- Advanced and Bio-Inspired Materials

EXPERIENCE

Industrial Attachment, IFAD Autos Ltd. — Assisted in vehicle assembly, mechanical fitting, and workflow optimization.
MTO-Engineer Assessment, PRAN Group — Conducted 7-day process evaluation; performed mapping and suggested productivity improvements.

RESEARCH & PUBLICATIONS

Undergraduate Thesis: Densification of Natural Wood to Improve Structural Properties.

Journal Articles:

- I. Alam, A. S. K. M. A. Mahee, F. A. Kakon, M. I. I. Rabby, Q. Liu, **Md. Maruf Mullah**. *Effect of Groove Shapes on Microstructural and Mechanical Behavior of Pipe Welds under Post-Weld Heat Treatment.* [Journal: *Science and Technology of Welding and Joining*][Under Review]

Conference Papers and Book Chapters:

- A. Tahsin, **Md. Maruf Mullah**, et al. *Impact Strength and Moisture Behaviour of Natural, Densified and Seasoned Wood.* ICMEAS 2025 [Accepted] (Conference Paper).
- Z. Imtiaz, N. S. Khan, **Md. Maruf Mullah**, M. S. Mondal. *Meteorological Drought Prediction Using Forecasting Models.* ICWFM 2025 [Under review] (Book Chapter).

PROJECTS

- **BD Freshwater Fish Detection** — MobileNetV2 model for classifying 12 fish species, deployed with Streamlit. GitHub
- **Surface Roughness Prediction** — Used Linear Regression, Ridge, Lasso, Decision Tree, Random Forest, Gradient Boosting, and SVM. Best model: Decision Tree (R^2: 0.85). GitHub
- **Dhaka Wind Prediction** — ANN and CatBoost models for wind speed/direction prediction. GitHub
- **Tailstock Tool Holder** — SolidWorks design manufactured via lathe machining. Google Drive

Technical Skills

Programming Languages: Python, C, HTML, MATLAB

Machine Learning & Data Analysis: Microsoft Excel, TensorFlow, PyTorch, Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn

Simulation Tools: ANSYS, COMSOL Multiphysics

CAD/3D Printing Tools: SolidWorks, FreeCAD, Anycubic Cobra

Document Preparation: LaTeX, Microsoft Word [8pt]

CERTIFICATIONS

- Machine Learning Specialization (Coursera)
- Neural Networks and Deep Learning (Coursera)
- Mathematics for Data Science (Simplilearn)
- Python Programming Bootcamp (Decoders Academy)
- MATLAB Onramp (Mathworks)
- Git Training (Simplilearn)
- Google Sheets (Simplilearn)
- Project-Based Excel (Grameenphone Academy)

REFERENCES

Major Md. Anisur Rahman, EME
Assistant Professor, ME Dept., MIST
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Dr. Md Sayem Hossain Bhuiyan
Associate Professor, ME Dept., MIST
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