

# Md Naeem

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## EDUCATION

**Bachelor of Science in Mechanical Engineering**

*Bangladesh University of Science and Technology*

**CGPA:** 3.66(current)/4.0

April 2019 - Present

*Dhaka, Bangladesh*

## TECHNICAL SKILLS

**Python**  
**SolidWorks**

**Autocad**  
**Tecplot**

**Matlab**  
**Word**

**Excel**  
**PowerPoint**

**Lammps**  
**L<sup>A</sup>T<sub>E</sub>X**

## RESEARCH INTERESTS

- Molecular Dynamics
- CFD
- Machine Learning
- Deep Learning
- Multiscale Materials Modeling
- Mechanics of Materials
- Solid Mechanics
- Finite Element Analysis

## PROJECTS

**Title:** Design of a Double Pipe Heat Exchanger

March 2023

**DOI:** [10.13140/RG.2.2.34562.90566](https://doi.org/10.13140/RG.2.2.34562.90566)

- **Tools:** SolidWorks, Ansys, HTRI, 3eplus
- Designed and fabricated a double pipe heat exchanger
- Calculated the design parameters of the heat exchanger by hand and using HTRI
- Created a 3D model of the heat exchanger using SolidWorks
- performed a simulation of the heat exchanger using Ansys

**Title:** Automated Decision-Making: A Rock- Paper-Scissors Playing Hand Robot

Sept. 2022

**DOI:** [10.13140/RG.2.2.22189.70881](https://doi.org/10.13140/RG.2.2.22189.70881)

- **Tools:** Python, Arduino, SolidWorks, OpenCV
- Created both Arduino and Python code using OpenCV library to detect the hand gesture
- Created a 3D model of the robot using SolidWorks
- Assembled the robot with 6 servo motors and implemented the gesture recognition algorithm

## PROFESSIONAL EXPERIENCE

**Trainee**

01 Nov. 2023 – 21 Nov 2023

*North West Power Generation Company Limited*

Khulna, Bangladesh

- Created Ts diagram for combined cycle power plant, demonstrating strong thermodynamic understanding
- Expertly aligned pumps during maintenance with laser tools, showcasing precision machinery skills
- Resolved non-starting fire pump issue, highlighting effective problem-solving and troubleshooting
- Acquired comprehensive knowledge of combined cycle power plant operations